Dearborn River TMDL Planning Area: Appendix B

Dearborn River TPA Appendix B

Table of Contents

SAMPLING AND ANALYSIS PLAN
DEARBORN RIVER MAINSTEM
MIDDLE FORK DEARBORN RIVER
SOUTH FORK DEARBORN RIVER
FLAT CREEK
WATER QUALITY DATA
BIOLOGICAL DATA AND REPORTS
DIVLUUIUAL DATA AND NEI UNIS

SAMPLING AND ANALYSIS PLAN

DEARBORN RIVER MAINSTEM

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Waterbody Name PACK No. County HUC DOSD PASS Station ID M. S. Albon County H.C. GPS Datum Child Child Lat H.D. Long 1.2.6.0.6.2 Verified? By GPS Datum Child					Trip ID: 2005- Dept. Date: 2017
Aby method other than GPS? Y N If Y what method used? If by map what is the map scale? Nurrients Metals Commons Sample ID/File Location: Sample Collection Procedur Sample Diffile Location: CRAB	Waterbody Name Station ID W. Station	43		County Leans	HUC
Sample ID/File Location: Sample ID/File Location: Sample ID/File Location: D3 - 0 < 3 3 \to Nutrients Substitute Plant Form D3 - 0 < 3 3 \to N \	at/Long obtained b	y met	bod other than GPS? Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Verified? By GPS D (Y what method used? If by map what is th	Dee): NAD 27 NAD 83
Nutrients Metals Commons D5 - 08231	Samples Taken:			Sample ID/File Location:	I -
Macroinvertebrate Habitat Asmt. 03-0833M 03-0833M 03-0833A 03-0833A	Water				Sample Collection Procedure
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C	ubstrate				Purpose:
C C C C C C C C C C C	ransect				
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275 .275 .92 / 98.3 ight □ Turbid □ Opaq	Temp: (C)	A	So A	The continues	
7.275 7.02 / 98.3 1.14 NTO 07.0	pH:	00	94		
#02 / 98.3 ight □ Turbid □ Opaq : 1.12 NTO	C: (mS/cm)		375		
ight □ Turbid □ Opaq = 1.17 NTU	C x 1000 =		umbo/cm		
ight Turbid Op	O: (mg/L)	4	1 36 1		
urbidity Comments: 1.17 N/TV 1.04 N/TV	TUR: Clear S SI	ight	Turbid Opaque		
1.04 10.10	urbidity Comments:	1	UT NTO		
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				100000000000000000000000000000000000000	N. A. C.

				Confluence	Station ID:	MIZORBINIKO
	Anneces of the last	idlaw 1	Bownan			
	"Distance from initial point	**Depth	"Velocity (at point)	**Width	"Area	**Discharge
1	15"	B	- 6			
2	17	.3	1/9			
3	22	,68	.60			
4	25	1.04	118			
5	28	1.1	1,24			
6	31	1.0	1,23			
7	35	1.0	1.43			1
8	35	7.15	,56			
9	37	1.55	1.33			
0	3.4	1.7	2:31			
1	41	1.4	,99			
2	43	1,25	169			
3	45	1.20	1.21			
4	47	1.1	1,01			
5	49	.8	,91			
6	5/	, 9	.75			
7	-53	,5	,60			
8	55	,45	.15			
9	57	, 2.	100			
0	56	. 2	16			
1						
2						
3						
4						
5						
3						
1						

MACROINVERTE	BRATE HABITAT ASSESSM	ENT FIELD FORM	RIFFLI	EJRUN PREVALENCE
Date: 7-24-0	3	Site Visit Code	03-0472	
The second second second	born River Pelo	P	Site: MIDDRIS	141206
Personnel: (A.	dia libruman			
HABITAT	T			
PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed riffle; riffle as wide as afterm 5 extends two times width of stream.	Riffle as wide as stream but length less than two times width.	Reduced riffle area that is not as wide as stream & its length less than two times width.	Nimes virtually non- existent
IA. score:	9-10	5-8	3-5	0.2
Commenta:				
1B. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravel, sand, silt, or bedrock substrate.
IB, score: /U	9-10	6-8	3-5	0-2
Comments:				
2. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles tess than 0.35 mm (-257).	Gravel, cobble, or boulder particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
. score: K	16-20	11-15	6-10	0-5
Comments:				
Channel Alteration (channelization, straightening, dredging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in netural state.	of crossings, etc. Evidence of past	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gablion or cement; over 80% of the stream reach channelized & disrupted.
score: (i)	16-20	11-15	6-10	0-6
Comments:				
4. Sediment Deposition	less than 5% of the bottom affected by sediment deposition.	bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	new gravel, coarse sand on old & new bars; 30- 20% of the bottom affected; sediment deposits at obstructions, constrictions, & bends;	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
score: C	16-26	11-15	5-10	0-5
Comments:				

L score: 16-20 11-15 5-16 0-5	5. Channel Flow Status	Water fills beselflow channel, minima amount of channel substrate exposed.	Water fills > 75% of the baseflow channel; < 25% channel substrate exposed.	Water fills 25-75% of the baseflow channel; riffle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
S. Bank Stability (score each bank) NOTE: Determine left or right gide while facing downstream. S. Bank Vegetation Protection (Socre ach bank) Protection (Socre	5. score: 15	16-20	11-15	5-10	
6. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. Determine left or right side while facing downstream. Description and the stream of the streambank surfaces covered by stabilizing vegetation; regetative disruption minimal or not proved stems that some streambank surfaces covered by stabilizing vegetation; reportation scores each bank) NOTE; reduces scores for annual crops. 8 weeds which do not hold solf well (e.g., knapveed). Left Side Description surfaces are such bank surfaces covered by stabilizing vegetation; regetative disruption minimal or not provided to streambank surfaces covered by stabilizing vegetation; disruption evident, but not affecting full plant growth potentials or any great extent; more than one-half of potential plant height evident. Description surfaces covered by vegetation; disruption evident, but not affecting full plant growth potentials glants and one-half of potential plant height remaining. Left Side Average: Right Side Ormanus: Width of vegetated zone Shore Shore	Comments:				
Left Side Second Comments Co	each bank) NOTE: Determine left or right side while facing	or bank failure; little apparent	infrequent, small areas of erosion mostly healed	reach have erosional areas; up to 60% of banks in reach have erosion; high erosion potential during	areas; "raw" areas frequent along straight sections & bends; obvious hank sloughing; 60-100% of banks have erosion scars on
Right Side / Comments: 7. Bank Vegetation Protection (score each bank) NOTE: reduce accord by stabilizing vegetation; wident; almost all plants allowed to grow naturally. 7. Socre: 10 9-18 6-8 3-5 0-2 Left Side / Width of vegetated zone / Right Side / Width of vegetated zone / Socre each side) 8. Vegetated Zone Width (score each side) 8. Right Side / Comments: Width of vegetated zone / Socre Socre	Lacore: 10	9-10	6-6	3-5	
Right Side / Comments		Left Side		-	-
7. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual crops & weeds which do not hold soll well (e.g. knapweed). 7. Score: 10 9-10 6-8 3-5 0-2 Left Side Width of vegetated Zone Width (score each side) 8. Vegetated Zone Width of vegetated zone scores Side Side Comments: 8. Vegetated Zone Width (score each side) 9-10 6-8 3-8 3-8 0-2 Left Side Average:		10			
7. Bank Vegetation Score and by stabilizing vegetations covered by stabilizing vegetations surfaces covered by stabilizing vegetations surfaces streambank surfaces covered by septations allowed to grow naturally. Over 90% of the streambank surfaces covered by septations wident, almost all plants allowed to grow naturally. Score: 10 9-18 6-8 3-5 0-2 Left Side Average: Right Side Over 90% of the streambank surfaces covered by septations covered by septations covered by septations covered by septations; which surfaces covered by septations covered by septations; which surfaces covered by septations; which surfaces covered by septations; which surfaces covered by septations covered by septations; which surfaces covered by septations; which surf		Right Side / ()	4 77 1	w. Uht and	è
Left Side Average: Right Side Comments: (by dist) Width of vegetated zone Width (score each side) Score: S-10 8-8 3-8 0-2 Left Side Average: Right Side Comments: (Comments: (by dist) distribution (score each side) Average: (Comments: (by distribution) (score each side) Right Side (Comments: (by distribution) (score each side) Average: (Comments: (by distribution) (score each side) Average: (Comments: (by distribution) (score each side) Average: (Comments: (by distribution) (score each side) (score each side) Average: (Comments: (by distribution) (score each side) (score	Protection (score each bank) NOTE: reduce scores for annual crops & weeds which do not hold soil well (e.g.	covered by stabilizing vegetation; vegetative disruption minimal or not evident; almost all plants allowed to	streambank surfaces covered by vegetation; disruption evident, but not affecting full plant growth potential to any great extent; more than one-half of potential plant	streambank surfaces covered in vegetation; disruption obvious; putches of bare soil or closely cropped vegetation common; less than one-half of potential	streambank surfaces covered by vegetation; extensive disruption of vegetation; vegetation removed to 2 inches or
Average: Right Side Comments: Width of vegetated zone Width of vegetated zone Width of vegetated zone So 100 feet. Width of vegetated zone So 100 feet. Width of vegetated zone Videth of veg	score: 10	9-10	6-8	3-5	0-2
Right Side Comments: (by Act Comments of the C		Left Side			
8. Vegetated Zone Width of vegetated zone > 100 feet. Width of vegetated zone 10-30 feet. 10-30				(3	100
8. Vegetated Zone Width (score each side) 30-100 feet. 10-30 feet. < 10 feet. < 10 feet. < 10 feet. 4. To feet. < 10 f		19			as if either
Left Side Average: Right Side (1) Comments:		Width of vegetated zone > 100 feet.		Width of vegetated zone 10-30 feet.	
Right Side (Comments:	acorec D	3-10	6-8	3-5	0-2
Right Side (Comments:		Left Side	100		
		- In	Comments:		
OTAL SCORE: Score compared to maximum possible:		Right Side			
	OTAL SCORE:		Score compared to	maximum possibl	0:

Waterbody Name Land Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale? Samples Taken: Sample Divisit # Location County Est of the County Est o	Vaterbody Name				(One Station per page)	Trip ID: SOC S- MEELO Date: 1/2 2/03
thod other than GPS? Y \ N \ If Y what method used? If by map what is the map scale? Nutrients Metals Commons Sample ID/File Location: Nutrients Metals Commons Sample ID/File Location: Aquatic Plant Form Aquatic Plant Form Pebble Count % Fines Pebble Count % Fines Site Visit Comments: Site Visit Comm	The same of the sa	DA	3	Location	County Lews + Clark	HUC
Nutrients	at/Long obtained	by mc	Long hod other than GPS? Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Ve. If Y what	rified? By GPS Datum (1) method used? If by map what is the map s	Circle One): (NAD 27) NAD 83 WGS84 scale?
Macroinvertebrate Habitat Asmt. Commons Stream Reach Asmt. Other Stream Reach Asmt. Other Stream Reach Asmt. Other Stream Reach Asmt. Other Stream Reach Asmt. Stream Reach Asmt	amples Taken:				Somela ID 65th Towns	
Macroinvertebrate Habitat Asmt. Stream Reach Asmt. Other Pebble Count % Fines Site Visit Comments: Stream Reach Asmt. Other Site Visit Comments: Stream Reach Asmt. Other Site Visit Comments: Stream Reach Asmt. Site	Vater			1	05.0735 W.	GRAB Callection Procedure
Aquatic Plant Form Stream Reach Asm. Other Pebble Count % Fines Macroinvertebraic Kick Duration: 4 Ste Visit Comments:	facroinvertebrate		-	C		SED-1
Stream Reach Asmi. Other	Jgae/Macrophytes	-	-		0.500 0.500	KICK HESS OTHER:
Stream Reach Asmt. Other Pebble Count % Fines me:	hlorophyll a	-	-		W. P. C.	PERLI OTHER:
Petbele Count % Fines	labitat Assessment	•		_	000000000000000000000000000000000000000	CHLPHL-2) OTHER:
Signature St. Signature	ubstrate	-				
	Transect		-			
State Stat	hotographs					
	ield Notes					
Site Visit Comments:	ther					
Ste Visit Comments:	feasurements:	E	28.85	Maceniana	16	
S. 2.1 S. 2.1 S. 2.1 Turbid Opaque	/ Flow (cfs)		S Adda Bull	Site Vicie	A MA	
% 21 3%5 3%5 1 Turbid □ Opaq	Temp: (C)	×		OHE LIST	Comments:	
Opaq	pH:		8,21			
Turbid Opaq	C: (mS/cm)		385			
Turbid Opaq	Cx 1000 =		umho/cm			
UR: Clear Slight Turbid Opaque	O: (mg/L)	V	11.19			
urbidity Comments: 1, 12, 10 TO 11 (JGNTO)	UR: Clear S	ight	Turbid Opaque			
	urbidity Comments	12	12 NTV 1 GOVED			

MACROINVERTE	BRATE HABITAT ASSESSM	ENT FIELD FORM	RIFFLI	EIRUN PREVALENCE
Date: 7 77	03	Site Visit Code	03-0705	
Waterbody: Droil	Contract of the Contract of th		Site: M/2) 6/3/	DR04
Personnel: 1 6	down Bown			
HABITAT	T			
PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed riffle; riffle as wide as stream & extends two times width of stream.	Hittle as wide as stream but length less than two times width.	Reduced riffle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
1A. score:	9-10	1-1	3-5	0-2
Commenta:				
18. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravel, sand, sift, or bedrock substrate.
1B, score:	9-10	6-8	3-5	0-2
Comments:	VERY MERINE COM	nated		
Z. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 6.35 mm (.25")).	Gravet, cobble, or boulder particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
2. score:	16-20	11-15	6-10	0-5
Comments:	in 4 1 stone	-		
3. Channel Alteration (channelization, straightening, deedging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past alterations (before past 20 years) may be resent, but more recent channel alteration is not present.	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gablion or cement; over 80% of the stream reach channelized & disrupted.
l, score: 30	16-20	11-15	6-10	0-5
Comments:		10000		
4. Sediment Deposition	Little or no enlargement of bars & less than 5% of the bottom affected by sediment deposition.	Some new increase in har formation, mostly from coarse gravet, 5- 20% of the bottom affected; slight deposition in pools.	new gravel, coarse sand on old & new bars; 30- 50% of the bottom affected; sediment deposits at obstructions, constrictions, & bends;	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
score:	16-20	11-15	6-10	0-5
Comments:				

5. Channel Flow Status	Water fills beseflow channel; minima amount of channel substrate exposed.	Water fits > 75% of the baseflow channel; < 25% channel substrate exposed.	Water fills 25-75% of the baseflow channel; riffle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
score: / U	16-20	11-15	5-10	0-5
Comments:				
Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream.	Banks statile, no evidence of erosion or bank fallure; little apparent potential for future problems.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; moderate frequency & size of erosional areas; up to 80% of banks in reach have erosion; high erosion potential during high flow.	Unstable; many eroded areas; "raw" areas frequent along straight sections & bends; obvious banks sloughing; 50-100% of banks have erosion scars on sideslopes.
A score:	3-10	6-8	3-5	0-2
	Left Side			the section and the section an
	1	Average:		
	Right Side			
Bank Vegetation Protection (score each bank) NOTE reduce scores for annual crops & weeds which do not hold soil well (a.g. knapweed).	Over 90% of the streambank surfaces covered by stabilizing vegetation; vegetative disruption minimal or not evident, almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by vegetation; disruption evident, but not affecting full plant growth potential to any great extent; more than one-half of potential plant height avident.	50-70% of the streambank surfaces covered in vegetation; disruption obvious; patches of bare soil or closely cropped wegetation common; less than one-half of potential plant height remaining.	Less than 50% of the streambank surfaces covered by vegetation; extensive disruption of vegetation; vegetation removed to 2 inches or less.
. score:	9-10	6-8	3-5	0-2
	Left Side			
	Mary Mary	Comments:		
	Right Side	1015 N Cal	able on bar	
t. Vegetated Zone Width (score each side)	Width of vegetated zone > 100 feet.	Width of vegetated zone 30-100 feet,	Width of vegetated zone 10-30 feet.	Width of vegetated zone < 10 feet.
score:	9-10	6-8	3-5	0-2
	Left Side			
	100	Average: Comments:		
	Right Side			
OTAL SCORE:		Score compared to	maximum possibl	e:

Waterbody Name Station D 1977 Station Station D 1977 Station Station D 1977 Station Lat 47 6 5.2.2 Long 12.2 5 5 8 7 Verified? By GPS Datum (Circle One), NAD 25 NAD 88 WGS84 LatLong obtained by method other than GPS? Y N 1/Y what method used? If by map what is the map scale? Sample Taken: Simple Taken: Simple Diffie Location: Simple Collection Procedure GRAB Scalinear Macroinvertebrate Babiat Atm. Station Macroinvertebrate Simple Station Simple Macroinvertebrate Macroinvertebrate Macroinvertebrate Macroinvertebrate Macroinvertebrate Simple Macroinvertebrate Ma	Vaterbody Name			Personnel: Landbach / Bounnan
Sample ID/Fite Location: Continuous Sample ID/Fite Location: Continuous D3.0824 D3.08	at 47° //6 '52	DESANCOS Visit # 12" 29" 54	County Louis & Class Location Below Falls Creek	HUC / 60 30102
itat Asm. Sometie Location: Continuous O3.0824 to Other D3.0824 to Other D3.0824 to Macroinvertebrate Kick Duration: Other Site Visit Comments:	Law Long obtained by me Samples Taken:	ethod other than GPS? Y 🗌 N	If Y what method used? If by map what is the map	1 1
itat Asm. S D3.0824 M D3.0824 A I Other S D8.0824 C Macroinvertebrate Kick Duration: C D0.6 Const. Site Visit Comments: C D0.6 Const.				Sample Collection Procedure GRAB
Other D3 - D824 A D3 - D824 A D4 - D824 A D4 - D824 A D4 - D824 A D4 - D824 A D4 - D82		I Macroinvertebrate Habitat Asmi		SED-1
Other		Aquatic Plant Form		PERI-I OTHER
nes Macroinvertebrate Kick Duration: Macroinve	morophyn a			CHLPHL-2 OTHER:
Macroinvertebrate Kick Duration: Confession Site Visit Comments: Cock Same	_	-		Purpose: TMD1
Macroinvenebrate Kick Duration: Cock Comments: Cock Cock Cock Cock Cock Cock Cock Cock		-		
Macroinvertebrate Kick Duration: Constitution of Site Visit Comments: Constitution of Constitu	hotographs			
Macroinvertebrate Kick Duration: Confession Site Visit Comments: C	leld Notes			
Macroinvertebrate Kick Duration: Cock Come	ther			
Site Visit Comments: Dec Sans vem		4/19/		
Vem		Est	10.00	Kick Length (Pt.):
H: C: (mS/cm) C: (mS/cm) C: (1000 =		13.44 A		State of the state
C: (ms/cm) C x 1000 =	H:			
Cx 1000 = µmho/cm O: (mg/L)	C: (mS/cm)	270		
O: (mg/L) 9.94 95 10 50 UR: Cleur [] Slight [] Turbid [] Opaque [] urbidity Comments: 94 10 75	Cx 1000 =	umbo/cm		
UR: Clear □ Slight □ Turbid □ Opaque □ urbidity Comments: 34 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		156 1		
irbidity Comments: 54 NTO	UR: Clear Slight	Turbid Ontons		
49. Will. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	urbidity Comments:	SA NYO		
		\$ PTG		
			AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO I	

	Waterbody:	Dorkon R	use above 1d	Site Visit Code:		MIZDRENGO
	Personnel: 5	had/Tina				
- 1	"Distance from initial point	"Depth	**Velocity (at	"Width	"Area	**Discharge
1	LI, 4 LEW	0.2	point)	ACCOUNT OF THE PARTY OF T	Total Carry Andrew Parks	THE REAL PROPERTY AND ADDRESS.
2	24	0.67_	1,21			
3	8.1	0.78	2:35			
4	10.4	1.08	2.34			
5	12.4	1,27	2.24			
6	14.4	1.95	1.63			
7	16.4	1,20	258			
8	15.4	1.18	2.32			
9	21.1	1,20	3.02			
10	22.4	1.25	3.25			
11	24.4	1.08	2.36			
12	26,4	1.25	2.74			
13	28.4	1.12	2.13			
14	304	6.95	1.48			
15	32.4	126	2.30			
16	34.4	1,28	3.05			
17	36.4	1,10	2,83			
8	38.4	0.88	1.28			
9	40.1	0.95	3.6/			
_	12.4	0.63	3.82			
15	94.4	8.80	2.20			
2	46.4	0.60	1.04			
3	50.1	0.10	048			
4	52.2 181	0110	1.08			
5	32,2 10	-/-	,0			
6						
7	-					
3						
9						
0						

Date:	71211103				Site V	isit Code	: 03-08	524
Waterboo	dy: Do	vb.	ra Lul	Nouve F	STORET S	Station ID	MIZD	RBIVROS
Personne	ol: SL-11	1	na					
			P	EBBLE C	OUNT			
Row ID	Particle Categ	ory	Size (mm)	Riffle Count	(Other)	Chara	cteristic Grou	ip: PEBL-CNT
		\Box				Sum	% of Total	Cum. Total
1	Silt / Clay		<1		5	0		0.00%
2	Sand		1-2		::	0		0.00%
3	Very Fine		2-4			0		0.00%
4	Fine		4-6		2.1	0		0.00%
5	Fine	-	6-8			0		0.00%
6	Medium	ď	8-12	1	::	0		0.00%
7	Medium	GRAVELS	12 - 16	1	:	0		0.00%
8	Coarse	0	16 - 22		1:	0		0.00%
9	Coarse	1	22 - 32	8-m 5 s	3-8 p. 4	0		0.00%
10	Very Coarse		32 - 45	7.	55	0		0.00%
11	Very Coarse	1	45 - 64	E	**	0		0.00%
12	Small	- 10	64 - 90	A	L	0		0.00%
13	Small	COBBLES	90 - 128	区::	15	0		0.00%
14	Large	COBB	128 - 180	MA	77	0		0.00%
15	Large	L	180 - 256	1:		0		0.00%
16	Small		256 - 362	:		0		0.00%
17	Small	ERS	362 - 512	*		0		0.00%
18	Medium	BOULDERS	512 - 1024			0		0.00%
19	Large	B	1024 - 2048			0		0.00%
20	Bedrock		> 2048			0		0.00%
21	Total # Samples			0	0	0	0.00%	

					Trip ID: Date:
Waterbody Name Station ID	NE OR	choon Pauer	Location	Location County Long & House	нис 10230163
Lat/Long obtained by	met	Long Long hod other than GPS? Y N	V _t	By d? If by map	GPS Datum (Circle One): NAD 27 NAD 83 WGS84 what is the man scale?
Samples Taken:				Committee Trademay	ΙH
Water		Nutrients Metals Commons	⊠ suo	Sample LIVE IIC LOCATION:	Sample Collection Procedure
Sediment					OKAB
Macroinvertebrate		Macroinvertebrate Habitat Asmt.			vices man
Algae/Macrophytes					PEDLI COTTER
Chlorophyll a	X			The state of the s	rea-i Olinek:
Habitat Assessment		Stream Reach Asmt. Other	_	A STATE OF THE STA	CHLPHL-2 OTHER:
Substrate		Pebble Count % Fines			Purpose:
Transect		CALL TO SERVICE OF THE SERVICE OF TH			
Photographs					
Field Notes					
Other					
Measurements:	Time:	(8.65	Macroin	Manufacturation	
Q/Flow (cfs)		Fee	Site Vicie	Site Visit Comments and Duration:	Kick Length (Ft.):
Temp: (C)	A	1	100	Comments	
pH:			Jane .	The state of the s	
SC: (mS/cm)			1	DESCRIPTION OF REAL PROPERTY.	
SC x 1000 ==		umbo/cm	11.60		100
DO: (mg/L)				Sold Sold Shahan da	Not dake the
TUR: Clear Slig Turbidity Comments:	th.	TUR: Clear Slight ☐ Turbid ☐ Opaque ☐ Turbidity Comments:			

	Waterbody: 13			087	Station ID:	MIDDREWRU
	Personnel:	Clardow	prouve)		
	"Distance from initial point	**Depth	"Velocity (at point)	"Width	"Area"	**Discharge
1	-		720 3-20-2			
2						
3						
4						
5						
6						
7			-			
8		$ \wedge$ \rangle	0			
9		1 4				
10						
11				_		
12				1		
13			1			
14						
15			-/			
16			-/-			48
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18			_			
19						
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25						
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27.						
28						
29						
30						
-						



	Stream Classific	ation	Revised 3/20
Date: 617-03		Site Visit Code:	03-0712
Waterbody: Darlor C	wer to they so	+ Station ID:	Mankenko
Personnel: TT (La dla co	Baun (n)		F
Bankfull Width (W _{bkf}) WIDTH of the stream channel, at bankf	ull stage elevation, in a riffl	200. 2 e section	Ft. 6.04 10
Mean DEPTH (d _{bkl}) Mean DEPTH of the stream channel cro riffle section.	oss-section, at bankfull stag	ge elevation, in a	Ft. S.o.L. Jo
Bnkfl. X-Section AREA (Abkl) AREA of the stream channel cross-section	ion, at bankfull stage eleva	tion, in a riffle section	Sq. Ft.
Width/Depth RATIO (W _{bid} / d _{bid}) Bankfull WIDTH divided by bankfull med		n.	210-9.8-
Maximum DEPTH (d _{mbkl})			Ft.
Maximum depth of the bankfull channel bankfull stage and thalweg elevations, in	cross-section, or distance a riffle section	between the	100
WIDTH of Flood-Prone Area (W	_{(pa})	VIO.3	Ft.
Twice maximum DEPTH, or (2 x d _{mbkl}) = WIDTH is determined. (riffle section)	the stage/elevation at whi	ch flood-prone area	
Entrenchment Ratio (ER)			
The ratio of flood-prone area WIDTH div (riffle section)	ided by bankfull channel W	VIDTH. (W _{tpa} / W _{bid})	
Channel Materials (Particle Size	Index) D50	1	mm.
The D50 particle size index represents the channel surface, between	ne median diameter of cha sen the bankfull stage and	nnel materials, as thalweg elevations.	10 43-1 O
Water Surface SLOPE (S)			Ft./Ft.
Channel slope = "rise" over "run" for a re- vidths in length, with the "riffle to riffle" w at bankfull stage.	ach approximately 20-30 b ater surface slope represe	ankfull channel nting the gradient	= Imile
Channel SINUOSITY (K)			map
Sinuosity is an index of channel pattern, of sivided by valley length (SL/VL); or estimate thannel slope (VS/S).	determined from a ratio of ated from a ratio of valley :	stream length slope divided by	
Stream Type	_		1
Comments: 13 - State Association			
Comments: Whisker Augustin			
			Data Mgmt. Approved

Date:	6-17-03				Site V	isit Code:	03-07	12
Waterbo	dy:	(A)	400 St.	+ 5	STORET S	Station ID:	Miab	
Personne	el: TT//add	100	Bown	Car				
				EBBLE C	OUNT			
		-	_	Riffle	(Other)			
Row ID	Particle Categ	ory	Size (mm)	Count	Count	Chara	cteristic Grou	ip: PEBL-CNT
		+	-	2.9		Sum	% of Total	Cum. Total
1	Silt / Clay	+	<1	II		0		0.00%
2	Sand	-	1-2			0		0.00%
3	Very Fine		2-4	-		0		0.00%
4	Fine	4	4-6			0		0.00%
5	Fine		6-8			0		0.00%
6	Medium	0	8-12	II		0		0.00%
7	Medium	GRAVELS	12 - 16	1.		0		0.00%
8	Coarse	0	16 - 22	I		0		0.00%
9	Coarse	Ī	22 - 32	Ø:		0		0.00%
10	Very Coarse	-	32 - 45	M:		0		0.00%
11	Very Coarse		45 - 64	M.T		0		0.00%
12	Small		64 - 90	M:		0		0.00%
13	Small	COBBLES	90 - 128	I		0		0.00%
14	Large	COB	128 - 180			0		0.00%
15	Large		180 - 256	9 *		0		0.00%
16	Small		256 - 362			0		0.00%
17	Small	RS	362 - 512			0		0.00%
18	Medium	BOULDERS	512 - 1024			0		0.00%
19	Large	BO	1024 - 2048			0		0.00%
20	Bedrock		> 2048			0		0.00%
21	Total # Samples			0	0	0	0.00%	

			ch Assessmer	nt Form		
Station ID:	IN DE BINE	Date:	4-17-03	Site Visit Code:	13-07	12
Waterbody:	prochose	Kiver		Reach Length:	- 1/2 m. le	
Waterbody Seg III):		Personnel:	Landaw	Bounas	
Station ID's on rea	ach:					10-322
Question 1, Stree	am Incisement:					
8 = channel stable	, no active downo	utting occurring; old do niał riparian vegetation	owncutting apparer will established in	nt but a new, stabl the riparian area.	e riparian area (Stage 1 and 5,	has formed within Schumm's
6 = channel has e the falling bands, s		vincutting that has begin evident. (Stage 4).	un stabilizing, vege	tation is beginning	to establish, e	ven at the base o
4 = small headcut,	in early stage, is	present. Immediate a	ction may prevent f	urther degradatio	n (early Stage 2).
		ly widening, limited ne ioneer species. Bank			not well vegeta	ted. The
		ng a gully, little or no r plain. Tributaries will				Only occasiona
The presence of a	ctive headcuts sho	ould nearly always kee	p the stream reach	from being rated	sustainable.	#
Actual Score:	7_	Potential Score:	- 8			
4.000	-					100
Comments						
Comments						
		5 00000000 9214	20.00			
Question 2, Perce		ks with Active Latera		-	*	
Question 2, Perce	erosion is in balar	nce with the stream an	nd its setting	2		1.2
Question 2, Perce	erosion is in balar		nd its setting	¥		1.5
Question 2, Perce 5 = the lateral bank 4 = there is a minim	erosion is in balar nal amount of activ	nce with the stream an	nd its setting occurring	*		13-
Question 2, Perce 5 = the lateral bank 4 = there is a minim	erosion is in balar nal amount of active rate amount of active	nce with the stream and relateral bank erosion give lateral bank erosion sion occurring	nd its setting occurring on occurring	*		
Question 2, Perce 5 = the lateral bank 5 = there is a minim 2 = there is a mode	erosion is in balar nal amount of active rate amount of active	nce with the stream and re lateral bank erosion five lateral bank erosion	nd its setting occurring on occurring	*		
Question 2, Perce 5 = the lateral bank 4 = there is a minim 2 = there is a mode 0 = there is excession	erosion is in balar nal amount of active rate amount of active	nce with the stream and relateral bank erosion give lateral bank erosion sion occurring	nd its setting occurring on occurring	¥		
Question 2, Perce 5 = the lateral bank 4 = there is a minim 2 = there is a mode 0 = there is excessivetual Score:	erosion is in balar nal amount of active rate amount of active lateral bank ero	nce with the stream and relateral bank erosion give lateral bank erosion sion occurring	d its setting occurring on occurring	Supplied by the	Watershed:	
Question 2, Perce 5 = the lateral bank 4 = there is a minim 2 = there is a mode 0 = there is excessive trual Score: Comments	ream is in Balance	nce with the stream an re lateral bank erosion five lateral bank erosion sion occurring Potential Score:	d its setting occurring on occurring			ons as would be
Question 2, Perce 3 = the lateral bank 4 = there is a minim 2 = there is a mode 9 = there is excession included Score: Comments Tuestion 3, The Stirlette stream exhibits precised in a stable	ream is in Balance its no excess sed dynamic system	nce with the stream and le lateral bank erosion five lateral bank erosion sion occurring Potential Score:	d its setting occurring in occurring	urs on point bars a	and other location	ons as would be
Question 2, Perce 3 = the lateral bank 4 = there is a minim 2 = there is a mode 9 = there is excession 1	ream is in Balance its no excess sed dynamic system d gravel's are app	nce with the stream and le lateral bank erosion five lateral bank erosion sion occurring Potential Score:	d its setting occurring in occurring	urs on point bars a	and other location	ons as would be
Question 2, Perce 3 = the lateral bank 4 = there is a minim 2 = there is a mode 9 = there is excessive total Score: Comments Duestion 3, The Structural Score in a stable = sediment clogge = mid-channel bank	ream is in Balance is in balance amount of active lateral bank ero	nce with the stream and le lateral bank erosion five lateral bank erosion sion occurring Potential Score:	d its setting occurring on occurring of Sediment Being ion, sediment occur, or other evidence	ors on point bars a	and other location	ons as would be
Question 2, Perce 3 = the lateral bank 4 = there is a minim 2 = there is a mode 9 = there is excessive total Score: Comments Duestion 3, The Structural Score in a stable = sediment clogge = mid-channel bank	ream is in Balance is in balance amount of active lateral bank ero	nce with the stream and le lateral bank erosion five lateral bank erosion sion occurring Potential Score: be with the Water and iment/bedload deposite arent in riffles or pools	d its setting occurring on occurring of Sediment Being ion, sediment occur, or other evidence	ors on point bars a	and other location	ons as would be
Question 2, Perce 3 = the lateral bank 4 = there is a minim 2 = there is a mode 0 = there is excessive ctual Score: Comments Duestion 3, The St = the stream exhibit expected in a stable = sediment clogge = mid-channel band = stream is braided	ream is in Balance is in balance amount of active lateral bank ero	nce with the stream and le lateral bank erosion five lateral bank erosion occurring Potential Score: be with the Water and iment/bedload deposit arent in riffles or pools occurring braided sys	d its setting occurring on occurring of Sediment Being ion, sediment occur, or other evidence	ors on point bars a	and other location	ons as would be
Question 2, Perce 3 = the lateral bank 4 = there is a minim 2 = there is a mode 0 = there is excessive count Score: Comments Question 3, The Street stream exhibit spected in a stable = sediment clogge = mid-channel band = stream is braided ctual Score;	ream is in Balance is in balance amount of active lateral bank ero	nce with the stream and le lateral bank erosion five lateral bank erosion occurring Potential Score: be with the Water and iment/bedload deposit arent in riffles or pools occurring braided sys	d its setting occurring on occurring of Sediment Being ion, sediment occur, or other evidence	ors on point bars a	and other location	ons as would be

Question 4, Suffi	cient Soil Presen	to Hold Water and Act as a Rooting I	Medium:
		a with sufficient soil to hold water and a	
		ith sufficient soil to hold water and act a	
		ith sufficient soil to hold water and act a	
		th sufficient soil to hold water and act a	
	2	Potential Score:	
Actual Score:		Potential Score.	
Comments			
Question 5, Perc	ent of Stre@nban	with Vegetation having a Deep, Bind, species)	ding Rootmass: (see Appendix I for stability
6 - more than 809	6 of the streamban	comprised of plant species with deep,	binding root masses
4 - 60% to 80% of	the streambank o	mprised of plant species with deep, bin	ding root masses
a = 200% to 60% of	the streamhank o	mprised of plant species with deep bind	ding root masses
2 = 30% 10 00% 01	of the streambank	comprised of plant species with deep bi	inding root masses
U = 1055 triair 5076	//	The second secon	,
Actual Score:		Potential Score:	
	0000	bas difficult for	Vec to palled
Comments	0	0/	0 10
1 = 1%-5% of the r	arian area has nox iparian area has rx riparian area has r	xious weeds oxious weeds	
Actual Score:	- 0/	Potentia! Score:	
Comments			
Question 7. Distu	rbance-Caused U	desirable Plants:	
		undesirable plants	
	iparian area has un		
	riparian area has u		
	riparian area has		
No. 10 April 10 April 10	2	2	
Actual Score:		r Oldfilldi Sovie.	
Comments	-		
			SDAE vie

potential for woody	
8 - all and classes of	y Species Establishment and Regeneration: (Note: Skip this question if the riparian area has no species)
o - un ago elabora c	of native woody riparian species present (see table, Fig 2)
and shrubs, there m	native woody riparian species clearly absent, all others well represented. For sites with potential for the ay be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having a young age class present indicate potential for recovery.
4 = two age classes or the stand is comp	of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represent rised of mainly mature, decadent or dead plants
2 = disturbance indu dominate. Re-evalu	ced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species ate Question 1, incisement, if this has happened.
0 = some woody spe evaluated to ensure cedar	cies present (>10% cover), but herbaceous species dominate (at this point, the site potential should be that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or site has at least 5% cover of Russian olive and/or site has at least 5% cover of Russian olive.
Actual Score:	Potential Score:
Month design.	
Comments	mrke supplied upskedans
Commens	TORKE TOLKHOOT, ON CONTROLL
Question 9, Utilizati species)	ion of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody
4 = 0-5% of the availa	ble second year and older stems are browsed
3 = 5%-25% of the av	allable second year and older stems are browsed
2 = 25%-50% of the a	vallable second year and older stems are browsed.
	the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" re high-lined or umbrella shaped.
0 = there is noticeable	use (10% or more) of unpalatable and normally unused woody species.
Actual Score:	Potential Score:
Comments	
Question 10, Riparia	n/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank:
= 85% or more of the	e riparian/wetland plant cover has a stability rating ≥ 6
= 75%-85% of the rip	parian/wetland plant cover has a stability rating ≥ 6
= 65%-75% of the rip	arian/wetland plant cover has a stability rating ≥ 6
	sarian/wetland plant cover has a stability rating ≥ 6
= 55%-65% of the rip	e riparian/wetland plant cover has a stability rating ≥ 6
	s spenior receive plant cover has a stability rating 2 0
= less than 55% of th	
	Potential Score:
= less than 55% of th	

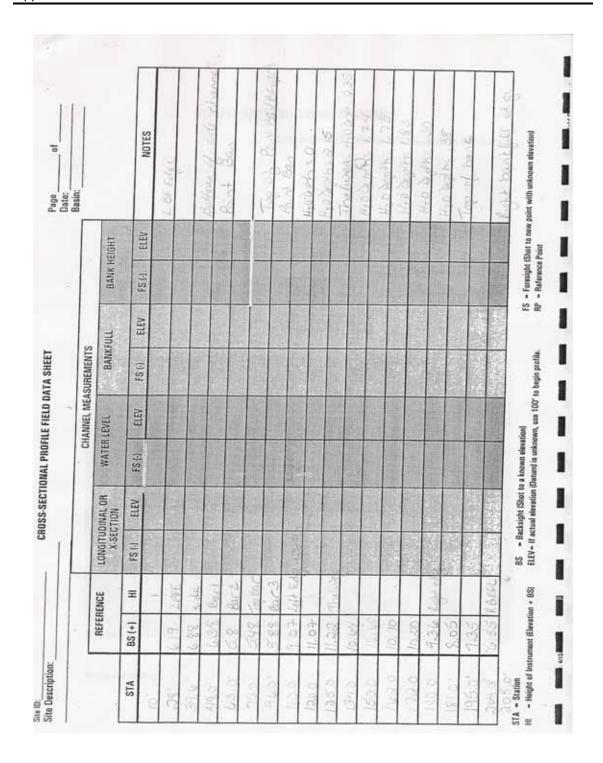
Question 11, Rip	arian Area/Floodplain Character	istics are Adequa	ite to D	Dissipate Energ	gy and Trap Sedim	ent.
odiment There	overflow channels, large rock, or v is little surface erosion and no evid- re are no headcuts where either ov	ence of long, conti	nuous	erosional areas	on floodplain/ripari	an area or
= rock and/or w	oody material is present, but general ional evidence of surface erosion.	ally of insufficient s Generally not seve	size to ere end	dissipate energ	y. Some sediment to veloped channels.	trapping
- leadequate ro	ck and/or woody material available casional headcuts where overland t	for dissipation of a	energy	or sediment tra	pping. There is sur	face erosion
= riparian area/f aterial suitable f	loodplain lacking any of these attrib or energy dissipation and sediment is adequate to resist further erosion the potential to create meander cut	utes: 1)adequate trapping. Erosion . Surface erosion	flood o	or overflow char	nnels, 2) large rock, continuous. Lackin	g vegetation or
ctual Score:	Potential S	core:				
omments						
				-		
		SUMMARY				4
				Actual Score	Possible Points	Potential Score
ESTION 1:	Stream Incisement			0	0, 2, 4, 6, 8	0
ESTION 2:	Lateral Cutting		- 5	0	0, 2, 4, 6	0
ESTION 3:	Stream Balance		-	0	N/A, 0, 1, 2, 3	0
ESTION 4:	Sufficient Soil		58	0	N/A, 0, 2, 4, 6	0
ESTION 5:	Rootmass		-	0	0, 1, 2, 3	0
IESTION 6:	Weeds			0	0, 1, 2, 3	0
IESTION 7:	Undesirable Plants		-	0	N/A, 0, 2, 4, 6, 8	0
JESTION 8:	Woody Species Establishment			0	N/A, 0, 1, 2, 3, 4	0
ESTION 9:	Browse Utilization		2.0	0	N/A, 0, 1, 2, 3, 4 N/A, 0, 2, 4, 6, 8	0
JESTION 10:	Riparian/Wetland Vegetative C			0	N/A, 0, 2, 4, 6, 6	0
ESTION 11:	Riparian Area/Floodplain Chara	ctensucs	-		IWA, U, Z, 4, 6	- 0
		т Т	otal	0	61	0
tential Score for	most Bedrock or Boulder streams (questions 1, 2, 3, 6, 7, 11)			0	(32)	0
ential Score for	most low energy "E" streams (questions 1 - 7, 10, 11)			0	(49)	0
TING: =	Actual Score Potential Sco	X 100 = % ratione	ng _	#DIV/0!		
	80-100% = SUSTAINABLE 50-80% = AT RISK LESS THAN 50% = NOT SUST	AINABLE				
only in certain, s	pecific situations can both of these	receive an "N/A".				
						DOAE uto

	Montana Department of Environmental Quality Supplemental Questions
	se questions does not have an effect on the rating above. these questions must consider the potential of the stream.
Question 12. Fis	sheries 'abita' / Stream Complexity Note: the answers to question 12 will be averaged
	uvenite Holdii g/Escape Cover p pools, wood, debris, overhanging vegetation, boulders, root wads, undercut banks and/or aquatic
6 = Fish habitat is	common (see above).
	noticeably reduced. Most pools are shallow and/or woody debris, undercut banks, overhanging vegetation is and/or aquatic vegetation are of limited supply.
2 = Pools and hab	itat features are sparse or non-existent or there are fish barriers.
0 = There is not e	nough water to support a fishery
N/A = Stream wor	old not support fish under natural conditions
Actual Score:	Potential Score:
	and a seal of the time the applicance of
Like the second	The state of the same of the same of the
Comments	
	replexity venile and adult cover types is present. High flow juvenile and adult refugia are present. or juvenile cover types are present. High flow refugia are reduced.
0 = High flow refug	ia are lacking.
N/A = Stream wou	d not support fish under natural conditions
Actual Score:	3 Potential Score:
	A CONTRACTOR OF THE CONTRACTOR
	make the I have sale I within
	mossy late of days soils I pockets
Comments	mossy lots of deg odels I pockets
12c. Spawning Ha	abitat (salmonid streams only)
12c. Spawning Ha 3 = Areal extent of	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent.
12c. Spawning Ha 3 = Areal extent of 4 = Areal extent of	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced.
12c. Spawning Ha 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced.
12c. Spawning Ha 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 1/A = Stream would	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions.
12c. Spawning Ha 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 1/A = Stream would	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Ha 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 1/A = Stream would	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions.
12c. Spawning Hi 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 4/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Hi 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 4/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Hi 3 = Areal extent of 4 = Areal extent of 9 = Areal extent of 1/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
2c. Spawning Hi = Areal extent of = Areal extent of = Areal extent of = Areal extent of t/A = Stream would ctual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
2c. Spawning Hi = Areal extent of = Areal extent of = Areal extent of = Areal extent of U/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Hi 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 1/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Hi 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 4/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Hi 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 4/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
B = Areal extent of 4 = Areal extent of 0 = Areal extent of	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Hi 3 = Areal extent of 4 = Areal extent of 0 = Areal extent of 4/A = Stream would actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:
12c. Spawning Hi B = Areal extent of 4 = Areal extent of 0 = Areal extent of N/A = Stream would Actual Score:	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. d not support fish under natural conditions. Potential Score:

12d. Fish Passsa	paceage barriers apparent
	n passage barriers apparent.
	assage barriers present.
	d not support fish under natural conditions. Potential Score:
Actual Score:	FORMAL SCORE.
Comments	
12e. Entrainment 8 = Entrainment of	fish into water diversions not an issue.
4 = Entrainment of	ish into water diversions may be a moderate issue.
	ish into water diversions may be a major issue.
Actual Score:	Potential Score:
Comments	
an a tra Casa	Actual Score 0 Potential Score 0
12a-e Avg. Score	710101111111111111111111111111111111111
ALCO INCHO DI WAS DESIGNATED	
Question 13. Sola	Radiation
Question 13. Sola 6 = More than 75%	r Radiation of the stream reach is adequately shaded by vegetation.
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation,
4 = 50-75% of the s 3 = Approximately 2	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade.
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably ringation, etc.
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75%	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade.
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score:	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably ringation, etc.
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score:	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably ringation, etc.
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably ririgation, etc. Potential Score: Potential Score:
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably rirrigation, etc. Potential Score: Potential Score:
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably ririgation, etc. Potential Score: Potential Score:
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 6 = in small patches 2 = in large patches	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably ririgation, etc. Potential Score: Potential Score: growth / Nutrients ent. Rocks are slippery. or along channel edge or discontinuous mats
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 6 = in small patches 2 = in large patches	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably rirrigation, etc. Potential Score: Potential Score: growth / Nutrients ent. Rocks are slippery. or along channel edge
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 6 = in small patches 2 = in large patches	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably ririgation, etc. Potential Score: Potential Score: growth / Nutrients ent. Rocks are slippery. or along channel edge or discontinuous mats
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 8 = in small patches 9 = in large patches 10 = Mats cover botto	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably rirrigation, etc. Potential Score: Potential Score: growth / Nutrients ant. Rocks are slippery. or along channel edge or discontinuous mats Improved the stream reach does not have adequate shade by vegetation or the water temperature is probably rirrigation, etc. Potential Score: Potential Score: Potential Score:
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments 2 = Algae not appare 4 = in small patches 2 = in large patches 0 = Mats cover botto W/A = No water	r Radiation of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably rirrigation, etc. Potential Score: Potential Score: growth / Nutrients ant. Rocks are slippery. or along channel edge or discontinuous mats m (hyper enriched conditions) or plants not apparent and rocks not slippery (toxic conditions)

4 = Slight			
2 = Moderate			
0 = Extensive			
N/A = No water			
Actual Score:	6	Potential Score:	
Comments			
Question 16, Bac	cteria		
4 = There are no k	mown anthropoger	nic sources of bacteria	
2 = Likely sources	of bacteria are pre	esent. Wastewater or concentrated livestock opera	ions are the most common sources.
0 = Feedlots are o	ommon or raw sew	vage is entering the stream	
Actual Score:	_4_	Potential Score:	
Comments			
Sussilian 17 Ma		75	- 1 - 3410
Question 17. Mad I = The stream has lies, caddis flies ar	a healthy and dive	erse community of macroinvertebrates. Stream riffl	es usually have an abundance of ma
= The stream has lies, caddis flies ar	s a healthy and dive nd/or stone flies.		es usually have an abundance of ma
= The stream has lies, caddis flies ar = The stream is d	s a healthy and dive nd/or stone flies.	tion tolerant taxa such as fly and midge larva.	es usually have an abundance of ma
i = The stream has lies, caddis flies an t = The stream is d = Macroinvertebra	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva.	es usually have an abundance of ma
= The stream has lies, caddis flies an t = The stream is d = Macroinvertebra l/A = Stream reach	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva.	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva.	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma
t = The stream has lies, caddis flies ar t = The stream is d	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma
I = The stream has lies, caddis flies ar I = The stream is d I = Macroinvertebra I/A = Stream reach ctual Score:	s a healthy and divi nd/or stone flies. dominated by pollut ates are rare or abs	tion tolerant taxa such as fly and midge larva. sent	es usually have an abundance of ma

Quet ion 18. Irrig	gation impacts (Assess during critical low flow periods or you may need to inquire locally about this. rom de-watering or inter-basin transfer of water.)	
8 = There are no n	noticeable impacts from irrigation	
organisms.	w resulting from irrigation practices are noticeable, however flows are adequate to support aquatic	
4 = Flows support	aquatic organisms, but habitat, especially riffles are drastically reduced or impacted.	
2 = The flow is low	v enough to severely impair aquatic organisms	
0 = All of the water	r has been diverted from the stream	
N/A = Stream reac	ch is ephemeral.	
Actual Score:	Potential Score:	
Comments		
Question 19. Lan	nduse activities - Sources	8
appear to be natura		
timber harvesting,		
4 = Impacts from la obvious signs of hu	anduse activities are obvious and occur throughout most of the stream reach. For example, there are urnan induced erosion, saline seeps or overgrazing within the watershed.	
2 = Landuse impac	cts are significant and widespread. Visual observation and photo documentation would provide ence that the stream is impaired.	
0 = Land use impac	cts are so intrusive that the stream has lost most of its natural features. The stream does not appear to most forms of aquatic life	be
Actual Score:	Potential Score:	
Charles Constitution	father process and nearby	
Comments		
Total Actual	0 Total Potential 0	
RATING	Total x 100 MDIV/0!	
OVERALL RATING	(Total NRCS Actual + Total MT Supplement Actual) x100 #DIV/0 (Total NRCS Potential + Total MT Supplement Potential))!
	75-100% = SUSTAINABLE 50-75% = AT RISK LESS THAN 50% = NOT SUSTAINABLE	



M12DRBNR05	Date-	7/24/2003	15:17
Dearborn River below confluence with Falls Cre	ek, above F	lat Creek Divers	ion

Geomorphology Dat	а	
parameter	value	units
Bankfull Width		Ft
Mean Depth		Ft
Bnkfull X-sect area		Sq Ft
Width/Depth		
Max Depth		Ft
Flood prone width		Ft
Entrenchement Ratio		
Water slope		
Channel Sinuosity		
BEHI Index Score (adjusted)		
BEHI Rating		
Channel D50	77	mm
Percentage of Fines (<2mm)	4.92	%
Stream Type		
Discharge	105.06	cfs

Stream Reach Habitat Asse	ssments		
Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)		%	
Stream Reach Assessment Score (MT adjusted)		%	
Macroinvertabrate Habitat Assessment Score	94.6	%	
OVERALL SITE RATING	S		
Stream Reach Assessment Score (NRCS)			
Stream Reach Assessment Score (MT adjusted)			
Macroinvertabrate Habitat Assessment Score			6 min 50'

Field Measurements of water chemistry		
parameter	value	units
Flow	105.06	cfs
Temperature, water	13.44	degree C
pH	8.41	
Specific Conductance	0.27	mS/cm
Dissolved Oxygen	9.94	mg/L
Dissolved Oxygen, % Saturation	95.1	%
Turbidity	0.76	NTU

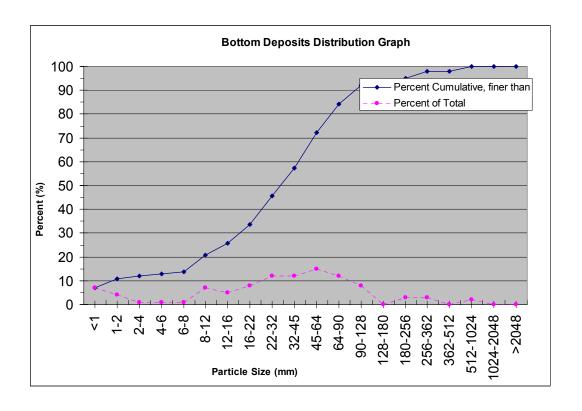
Lab Results from Field Sa	amples		
parameter	value	units	RL
Total Suspended Solids, TSS	ND	mg/L	10
Volatile Suspended Solids, VSS	ND	mg/L	10
TSS-VSS	ND	mg/L	10
Water Column Chlorophyll a	0.6	mg/m^3	0.1
Benthic Chlorophyll a	19.7	mg/m^3	0.1
Total Phosphorus, TP	0.056	mg/L	0.004
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5
Nitrate + Nitrite	ND	mg/L	0.01
Total Nitrogen, TN		mg/L	

Macroinvertabrate Data Results			
parameter	value	units	
TOTAL SCORE (max =18)	15	score	
PERCENT OF MAX SCORE	83	%	
IMPAIRMENT CLASSIFICATION	NON IMPAI	RED	
USE SUPPORT	FULL SUPP	ORT	

			Pebble Coun	t Data	
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	2	1.64	1.64
S	1.5	1-2	4	3.28	4.92
FG	3	2-4		0.00	4.92
FG	5	4-6	3	2.46	7.38
FG		6-8	2	1.64	9.02
MG	10	8-12	6	4.92	13.93
MG		12-16	4	3.28	17.21
CG		16-22	6	4.92	22.13
CG		22-32	10	8.20	30.33
CG		32-45	7	5.74	36.07
CG	54.5	45-64	11	9.02	45.08
SC		64-90	15		57.38
SC		90-128	20	16.39	73.77
MC		128-180	23		92.62
LC		180-256	5		96.72
LC		256-362	3	2.46	99.18
SB		362-512	1	0.82	100.00
MB	768	512-1024		0.00	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	122	100.00	100.00
		D50 particle size (mm)	77		
		% Fines (<2mm)	4.92		
	M12DRBNR05	Date-	7/24/2003		15:17
	Dearborn River below c	onfluence with Falls Cr	eek, above Flat Cr	eek Diversio	n

M12DRBRNR04	Date-	7/22/2003	18:4
Dearborn River at Hwy 287			
Geomorphology Dat	a		
parameter	value	units	
Bankfull Width	75.00		
Mean Depth	2.60		
Bnkfull X-sect area Width/Depth	195.13 28.83	Sq Ft	
Max Depth	3.49	Ft	
Flood prone width	238.00		
Entrenchement Ratio	3.17		
Water slope	0.0010		
Channel Sinuosity			
BEHI Index Score (adjusted)			
BEHI Rating Channel D50	38.5	mm	
Percentage of Fines (<2mm)	10.89		
Stream Type		border C4c d	ue to low slo
Discharge	38.00	cfs	1
Stream Reach Habitat Asse			
Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	85		
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score		%	
OVERALL SITE RATING	91.5	%	
OVERALL SITE RATING		aired, Fully	
Stream Reach Assessment Score (NRCS)		oorting	
		· · · · ·	1
Stream Reach Assessment Score (MT adjusted)			
			4
Managine and banks Habitat Assassant Cours			4.5 min
Macroinvertabrate Habitat Assessment Score			4.5 min 120'
Macroinvertabrate Habitat Assessment Score			
Macroinvertabrate Habitat Assessment Score			
Field Measurements of water	chemistry	<u> </u>	
Field Measurements of water parameter	chemistry value	l units	
Field Measurements of water parameter Flow	value 38.00	units cfs	
Field Measurements of water parameter Flow Temperature, water	value 38.00 26.94	units cfs degree C	
Field Measurements of water parameter Flow Temperature, water pH	38.00 26.94 8.21	units cfs degree C	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance	value 38.00 26.94 8.21 0.285	units cfs degree C mS/cm	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen	value 38.00 26.94 8.21 0.285 7.55	units cfs degree C mS/cm mg/L	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	value 38.00 26.94 8.21 0.285 7.55 94.8	units cfs degree C mS/cm mg/L	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen	value 38.00 26.94 8.21 0.285 7.55 94.8	units cfs degree C mS/cm mg/L %	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39	units cfs degree C mS/cm mg/L %	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39	units cfs degree C mS/cm mg/L %	120'
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39	units cfs degree C mS/cm mg/L %	120'
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 amples value ND	units cfs degree C mS/cm mg/L % NTU units mg/L	120' RL 10
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 amples value ND ND ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L	120' RL 10 10
Field Measurements of water parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 ****mples**/value ND ND ND ND ND ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L	#L 10 10 10 10
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 ***********************************	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L	120' RL 10 10 10 0.1
Field Measurements of water parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	value 38.00 26.94 8.21 0.285 94.8 1.39 **The company of the company of t	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/m^3	#L 10 10 10 10
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 ***********************************	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/m^3 mg/L	120' RL 10 10 10 0.1 0.1
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/m^3	## 10 10 10 0.1 0.1 0.004
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 ***mples **value ND ND ND ND 1.8 10.5 0.018 ND ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	#L 10 10 10 0.1 0.1 0.004 0.5
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 ***mples **value ND ND ND ND 1.8 10.5 0.018 ND ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/m^3 mg/L mg/L mg/L	#L 10 10 10 0.1 0.1 0.004 0.5
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 ***mples **value ND ND ND ND 1.8 10.5 0.018 ND ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	#L 10 10 10 0.1 0.1 0.004 0.5
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	#L 10 10 10 0.1 0.1 0.004 0.5
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	#L 10 10 10 0.1 0.1 0.004 0.5
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data R	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 1.39	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	#L 10 10 10 0.1 0.1 0.004 0.5
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data R parameter	value 38.00 26.94 8.21 0.285 7.55 94.8 1.39 1.39	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	#L 10 10 10 0.1 0.1 0.004 0.5

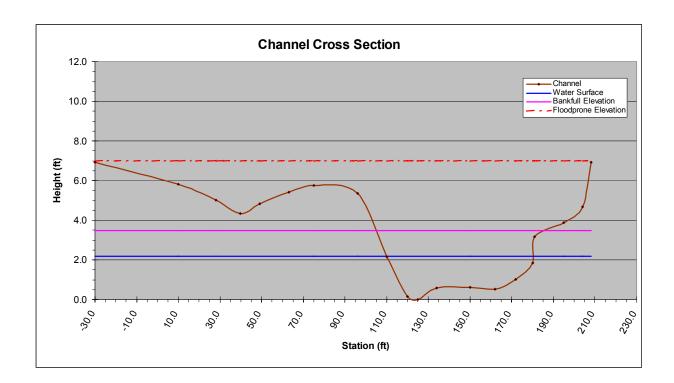
			Pebble Coun	t Data	
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	7	6.93	6.93
S	1.5	1-2	4	3.96	10.89
FG	3	2-4	1	0.99	11.88
FG	5	4-6	1	0.99	12.87
FG		6-8	1	0.99	13.86
MG	10	8-12	7	6.93	20.79
MG		12-16	5	4.95	25.74
CG	18	16-22	8	7.92	33.66
CG		22-32	12	11.88	45.54
CG		32-45	12	11.88	57.43
CG	54.5	45-64	15	14.85	72.28
SC	77	64-90	12	11.88	84.16
SC	109	90-128	8	7.92	92.08
MC		128-180		0.00	92.08
LC		180-256	3		95.05
LC	309	256-362	3	2.97	98.02
SB	437	362-512		0.00	98.02
MB	768	512-1024	2	1.98	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	101	100.00	100.00
		D50 particle size (mm)	32-45		
		% Fines (<2mm)	10.89		
	M12DRBRNR04	Date-	7/22/2003		18:45
	Dearborn River at Hwy 28	7			



	BEHI Field Measures			BEHI Calcu	lated Valu	es	
	Parameter		Value	Units	Parameter	Value	Units
= -					Slope	0.0010	
ongitudinal Information	Rod reading @ Upstream Edge of	Water	10.47	feet	Sinuousity		
					Max Depth	3.49	feet
igr orr	Rod reading @ Downstream Edge	of Water	11.07	feet	Floodprone Height	6.98	feet
<u>=</u> [2	Stream Distance		625.00	feet	Mean Depth	2.60	feet
_	Straightline Distance			feet	Bankfull Width	75.00	feet
=	Left Edge of Bankfull	•	110.00	feet	Floodplrone Width	238.00	feet
Cross-Sectional Information	Right Edge of Bankfull		185.00	feet	Bankfull Area	195.13	ft^2
oss-Section Information	Rod reading @ Thalweg		11.22	feet	FloodproneArea		ft^2
Se	Rod reading @ Bankfull Depth		7.73	feet	W/D Ratio	28.83	
-SS-	Rod reading @ Floodplain Depth		4.24	feet	Cross Sectional Area	195.13	ft^2
ğ=	Left Edge of Floodprone depth		-30.00	feet	Entrenchment Ratio	3.17	
0	Right Edge of Floodprone depth		208.00	feet			
uo	Bank Height			feet			
atic	Bankfull Height			feet	Bank Ht/Bankfull Ht		
Ĕ	Root Depth			feet	Root Depth/Bank Ht		
آو	Root Density			%	Root Density		%
≐	Bank Angle			Degrees	Bank Angle		degrees
BEHI Information	Surface Protection			%	Surface Protection		%
_							
Stress tion	Velocity at thalweg			ft/sec	Velocity Gradient		ft/sec/ft
tre	Tape reading at thalweg			feet	Near Bank stress /		
ar Bank Stre Information	velocity at left bank			ft/sec	Mean Shear stress		
Bank format	tape reading at left bank			feet	A nb / A		
E 6	Near bank stress						
Near	Mean shear stress						
Z	Near bank x-sectional area			ft^2			

M12DRBRNR04 Date- 7/22/2003 18:45
Dearborn River at Hwy 287

M12DRBRNR04 Date- 7/22/200	18:4	1 5		
Dearborn River at Hwy 287				
BEHI Associated Index Value (from form)	Pos	sible Adjustment Factors		
Bank Ht/Bankfull Ht			Bank Materials	
Root Depth/Bank Ht		Bedrock is alw	vays Very Low	
Root Density		Boulders are a	always Low	
Bank Angle		Cobble decrease the category by one unless the mixture of Sand/Gravel is over 50%		
Surface Protection				
Total Index Value		Gravel- adiust	the values up 5-10 pts depending on	
Numeric Adjustments:		sand composition		
Bank Materials Index adjustment:		Sand- adjust the values up 10 pts		
Dank Materials index adjustinent.		silt/clay- no ad	ljustment	
			Stratification	
Bank Stratification Index adjustment:		5-10 pts upwa	rd depending on position of unstable	
Total adjusted Index Value:			to bankfull stage	
Bank Erosion Potential Rating:				



M12DRBNR06	Date-	7/24/200	11:00
Dearborn River below confluence with Flat Cre	ek on Dearb	orn Ranch	
Compunhology	\oto		- 1
Geomorphology D	value	units	_
Bankfull Width	value	Ft	_
Mean Depth		Ft	_
Bnkfull X-sect area		Sq Ft	
Width/Depth			
Max Depth		Ft	
Flood prone width Entrenchement Ratio		Ft	_
Entrenchement Ratio Water slope			_
Channel Sinuosity			
BEHI Index Score (adjusted)			
BEHI Rating		•	
Channel D50		mm	
Percentage of Fines (<2mm)		%	
Stream Type	12 10	ofo	_
Discharge	43.10	C18	_
Stream Reach Habitat As	sessments	3	
Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	7 4.14	%	
Stream Reach Assessment Score (MT adjusted)		%	
Macroinvertabrate Habitat Assessment Score	92.3	%	
OVERALL SITE RATI	NGS		
Stream Reach Assessment Score (NRCS)			
			┥ ▮
Stream Reach Assessment Score (MT adjusted)			
Stream Reach Assessment Score (MT adjusted)			
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score			3.5 min
			3.5 min 60'
Macroinvertabrate Habitat Assessment Score	ar chamic	· · ·	
Macroinvertabrate Habitat Assessment Score Field Measurements of wat			
Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter	value	units	
Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow	value 43.10	units cfs	
Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter	value 43.10	units cfs degree C	
Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow Temperature, water	value 43.10 19.5 8.4	units cfs degree C	
Field Measurements of wat parameter Flow Temperature, water oh Bepecific Conductance Dissolved Oxygen	value 43.10 19.5 8.4 0.275 9.02	units cfs degree C mS/cm mg/L	
Field Measurements of wat parameter Flow Temperature, water oh Bepecific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	value 43.10 19.5 8.4 0.275 9.02 98.3	units cfs degree C mS/cm mg/L	
Field Measurements of wat parameter Flow Temperature, water oh Bepecific Conductance Dissolved Oxygen	value 43.10 19.5 8.4 0.275 9.02 98.3	units cfs degree C mS/cm mg/L	
Field Measurements of wat parameter Flow Temperature, water oh Bepecific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	value 43.10 19.5 8.4 0.275 9.02 98.3	units cfs degree C mS/cm mg/L	
Field Measurements of wat parameter Flow Temperature, water oh Beschic Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L	
Field Measurements of wat parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11 Samples	units cfs degree C mS/cm mg/L % NTU	60'
Field Measurements of wat parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11 Samples value Value	units cfs degree C mS/cm mg/L % NTU	60'
Field Measurements of wat parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L	60'
Field Measurements of wat parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11 Samples value Value	units cfs degree C mS/cm mg/L % NTU	60'
Field Measurements of wat parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L	60' RL 10 10
Field Measurements of wat parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/M^3 mg/m^3	60' RL 10 10 0.1 0.1
Field Measurements of wat parameter Flow Temperature, water oh Beschied Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/m^3 mg/L	60' RL 10 10 0.1 0.1 0.004
Field Measurements of wat parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wat parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	60' RL 10 10 0.1 0.1 0.004
Field Measurements of wat parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wat parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wat parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wat parameter Flow Temperature, water OH Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Bental Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter Macroinvertabrate Data parameter	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wat parameter Flow Temperature, water OH Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter TOTAL SCORE (max = 18)	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wat parameter Flow Temperature, water OH Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Bental Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter Macroinvertabrate Data parameter	value 43.10 19.5 8.4 0.275 9.02 98.3 1.11	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5

M12DRBRNR04	Date-	6/17/2003	18;00
Dearborn River at Hwy 287			

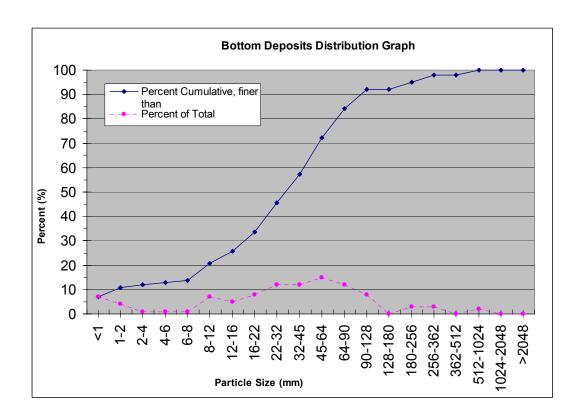
Geomorphology Data					
parameter	value	units			
Bankfull Width	75.00	Ft			
Mean Depth	2.60	Ft			
Bnkfull X-sect area	195.13	Sq Ft			
Width/Depth	28.83				
Max Depth	3.49				
Flood prone width	238.00	Ft			
Entrenchement Ratio	3.17				
Water slope	0.0010				
Channel Sinuosity					
BEHI Index Score (adjusted)					
BEHI Rating					
Channel D50	38.5				
Percentage of Fines (<2mm)	10.89	%			
Stream Type					
Discharge	202.00	cfs			

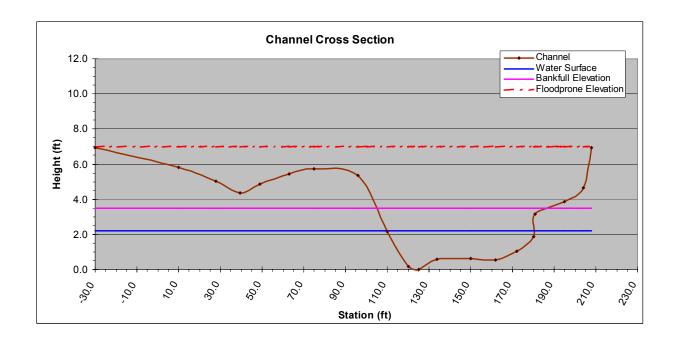
Stream Reach Habitat Assessments						
Parameter	Value	Units				
Stream Reach Assessment Score (NRCS)	85	%				
Stream Reach Assessment Score (MT adjusted)	91 %					
Macroinvertabrate Habitat Assessment Score		%				
OVERALL SITE RATIN	IGS					
Stream Reach Assessment Score (NRCS)		ppaired, Fully pporting				
Stream Reach Assessment Score (MT adjusted)						
Macroinvertabrate Habitat Assessment Score						

Field Measurements of water chemistry						
parameter value units						
Flow	202.00	cfs				
Temperature, water	17	degree C				
pH						
Specific Conductance		mS/cm				
Dissolved Oxygen		mg/L				
Dissolved Oxygen, % Saturation %						
Turbidity		NTU				

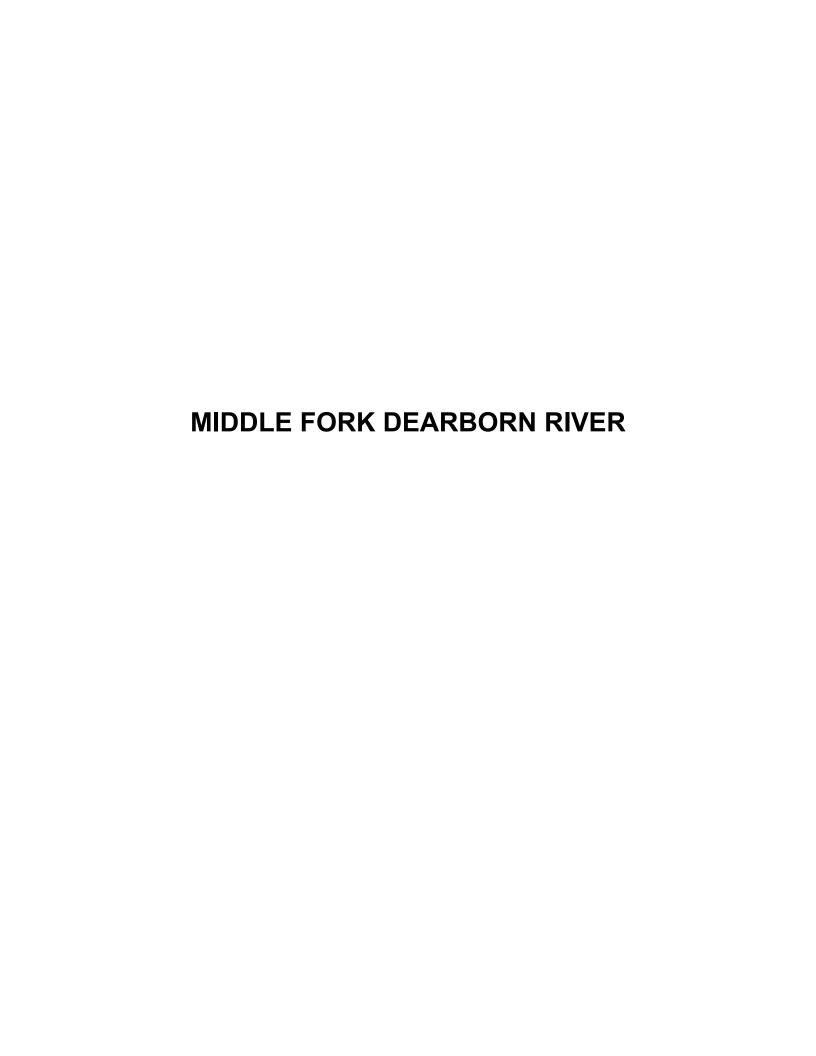
Lab Results from Field Samples				
parameter	value	units	RL	
Total Suspended Solids, TSS	ND	mg/L	10	
Volatile Suspended Solids, VSS	ND	mg/L	10	
TSS-VSS	ND	mg/L	10	
Water Column Chlorophyll a	ND	mg/m^3	0.1	
Benthic Chlorophyll a	12.3	mg/m ³	0.1	
Total Phosphorus, TP	ND	mg/L	0.004	
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5	
Nitrate + Nitrite	ND	mg/L	0.01	
Total Nitrogen TN		ma/l		

		Pebble Count Data				
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total	
S/C	0.5	<1	7	6.93	6.93	
S	1.5	1-2	4	3.96	10.89	
FG	3	2-4	1	0.99	11.88	
FG	5	4-6	1	0.99	12.87	
FG	7	6-8	1	0.99	13.86	
MG	10	8-12	7	6.93	20.79	
MG		12-16	5	4.95	25.74	
CG	18	16-22	8	7.92	33.66	
CG	27	22-32	12	11.88	45.54	
CG	38.5	32-45	12	11.88	57.43	
CG	54.5	45-64	15	14.85	72.28	
SC	77	64-90	12	11.88	84.16	
SC		90-128	8	7.92	92.08	
MC	154	128-180		0.00	92.08	
LC	218	180-256	3	2.97	95.05	
LC	309	256-362	3	2.97	98.02	
SB	437	362-512		0.00	98.02	
MB	768	512-1024	2	1.98	100.00	
LB	1536	1024-2048		0.00	100.00	
BR		>2048		0.00	100.00	
		TOTALS	101	100.00	100.00	
		D50 particle size (mm)	32-45			
		% Fines (<2mm)	10.89			
	M12DRBRNR04	Date-	6/17/2003		18;00	





	BEHI Field M	easures		BEHI Calcul	ated Value	es
	Parameter	Value	Units	Parameter	Value	Units
ongitudinal Information	Rod reading @ Upstream Edge			Slope	0.0010	
	of Water	10.47	feet	Sinuousity		
	Rod reading @ Downstream			Max Depth	3.49	feet
	Edge of Water	11.07	feet	Floodprone Height	6.98	feet
ات ب	Stream Distance	625.00	feet	Mean Depth	2.60	feet
	Straightline Distance		feet	Bankfull Width	75.00	feet
_	Left Edge of Bankfull	110.00	feet	Floodplrone Width	238.00	feet
Cross-Sectional Information	Right Edge of Bankfull	185.00	feet	Bankfull Area	195.13	ft^2
lti čti	Rod reading @ Thalweg	11.22	feet	FloodproneArea		ft^2
oss-Section Information	Rod reading @ Bankfull Depth	7.73	feet	W/D Ratio	28.83	
ss- for	Rod reading @ Floodplain Depth		feet	Cross Sectional Area	195.13	ft^2
ğ =	Left Edge of Floodprone depth	-30.00	feet	Entrenchment Ratio	3.17	
0	Right Edge of Floodprone depth	208.00	feet			
uo	Bank Height		feet			
atic	Bankfull Height		feet	Bank Ht/Bankfull Ht		
Ĕ	Root Depth		feet	Root Depth/Bank Ht		
Ę.	Root Density		%	Root Density		%
≐	Bank Angle		Degrees	Bank Angle		degrees
BEHI Information	Surface Protection		%	Surface Protection		%
_						
Stress	Velocity at thalweg		ft/sec	Velocity Gradient		ft/sec/ft
tre on	Tape reading at thalweg		feet	Near Bank stress / Mean		
k S ati	velocity at left bank		ft/sec	Shear stress		
ar Bank Stre Information	tape reading at left bank		feet	A nb / A		
면원	Near bank stress					
Near	Mean shear stress					
Z	Near bank x-sectional area		ft^2			



			(One Station per page)	Trip ID: 203 Decend Date: Personnel: A perso
Waterbody Name Station ID	1 0	AMENGEON Visit # Location	County August Hillow	нос /(д/30/163
Lat/Long obtained b	y met	Long 112 112 112 112 11 11 11 11 11 11 11 11	Lat Carlo Ca	GPS Datum (Circle One): NAD 27 NAD 83 WGS84 what is the map scale?
Samples Taken:			Sample ID/III a constant	
Water	Ø	Nutrients Metals Commons	+	Sample Collection Procedure
Sediment			1	GRAB
Macroinvertebrate		Macroinvertebrate Habitat Asmt.		- 4
Algae/Macrophytes		Aquatic Plant Form		=
Chlorophyll a			Charles Charles	real Other
Habitat Assessment		Stream Reach Asmt Onbor	200000000000000000000000000000000000000	CHLPHL2 OTHER:
Substrate		Pebble Count % Espace		Purpose:
Transect				
Photographs				
Field Notes				
Other				
Measurements:	Time:	/8.30	Macroinvertebrate Kick Duration:	Wink I among the to
Q / Flow (cfs)		Est. Site	Site Visit Comments:	ANA LANGUI (TL.):
Temp: (C)	×	15.69 A	Strate A.P.	
pH:	Ĭ,	8.11		
SC: (mS/cm)		- Other Part - Stage	of book amount and	
SC x 1000 =		umbo/cm	0	ON LEGICAL
DO: (mg/L)		48 48 89 5		
TUR: Clear Si	ight [ght Turbid Opaque		
Turbidity Comments:	3			
	9	93, AJTU ®		
			A COLOR	

	Date: // // // Waterbody: // //		ns feet o		(23 - 67) Alto Station ID:	MIDMEDERO
-	Personnel: La					
-	"Distance from initial point	"Depth	"Velocity (at point)	"Width	"Area	**Discharge
1	121 LEW	0,4	8			
2	131	0.55	01/0			
3	14	0 BS	0,/0			
4	15	0.75	0,62			
5	14	0,90	0.88			
6	17 Thology	0.90	8,96			
7	18	0.85	1,19			
8	19	0.8	1,09			
9	90	0,5	1.24			
10	7/	0.5	1,22			
11	22	0,5	1,43			
12	25	0.5	1,53			-
13	21	0,4	1.54			
14	25	0.5	1.54			
15	24	06	1,38			
16	27	0.65	/:30			
17	28	0,70	1.27		50.	
18	29	3,85	1.060			
19	30	0480	1.12			
20	31	0,60	0,91			
21	32	0150	0,60			
22	33	0.30	0,46			
23	34' REW	1	-			
24						
25						
26						
27						
28						
29						
30						

	Stream Classification	
Date: 6-19-03	Site Visit Code:	: 03-0700
Waterbody: Maddle	Fork Denda in Topingally Station ID:	MIS INFUBERRY
Per onnel: Lada	3 Bruman	- 4
Bankfull Width (W _{bkl}) WIDTH of the stream channe	el, at bankfull stage elevation, in a riffle section	_Ft.
Mean DEPTH (d _{bkf}) Mean DEPTH of the stream of the section.	channel cross-section, at bankfull stage elevation, in a	_Ft.
Bnkfl. X-Soction AREA AREA of the stream channel	(A _{bkr}) cross-section, at bankfull stage elevation, in a riffle section	Sq. Ft.
Width/Depth RATIO (W Bankfull WIDTH divided by be	okt / dokt) ankfull mean DEPTH, in a riffle section.	-
Maximum DEPTH (d _{mbk}	4)	Ft.
Maximum depth of the bankfu bankfull stage and thalweg ele	ill channel cross-section, or distance between the evations, in a riffle section	
WIDTH of Flood-Prone	Area (W _{fpa})	Ft.
Twice maximum DEPTH, or (NIDTH is determined. (riffle s	$2 \times d_{mod}$) = the stage/elevation at which flood-prone area ection)	
Entrenchment Ratio (E	R)	199
The ratio of flood-prone area \ riffle section)	WIDTH divided by bankfull channel WIDTH. (W _{be} / W _{bid})	
Channel Materials (Part	licle Size Index) D50	mm.
The D50 particle size index re ampled from the channel sur	presents the median diameter of channel materials, as face, between the bankfull stage and thalweg elevations.	
Vater Surface SLOPE (Ft/Ft. Shor Dalie
thannel slope = "rise" over "ru hidths in length, with the "riffle t bankfull stage.	in" for a reach approximately 20-30 bankfull channel to riffle" water surface slope representing the gradient	41,044 - 6.40
hannel SINUOSITY (K)	· · · · · · · · · · · · · · · · · · ·	Options Line
inuosity is an index of channel vided by valley length (SL/VL hannel slope (VS/S).	of pattern, determined from a ratio of stream length); or estimated from a ratio of valley slope divided by	1475 400
troom Tune	D400W	186
tream Type	0 0006	147.5
omments:	18000 3/55/13/06	3433

			30.31	INAIE	DEQ/MD		14.00	
Γate:	(6-19-03)		_	-			: 103-07	0.00
1º/aterbod	ly: MARIA TO		NEGLINY	S	TORET S	tation ID:	100	DEROY
rersonne	1: Ladaw	JB	0,00000					
			PE	BBLE CO	TNUC			
Row ID	Particle Categ	ory	Size (mm)	Riffle Count	(Other) Count	Chara	cteristic Gro	up: PEBL-CNT
						Sum	% of Total	Cum. Total
1	Silt / Clay	1	<1	NN	. V	0		0.00%
2	Sand		1-2			0		0.00%
3	Very Fine		2-4	;		0		0.00%
4	Fine		4-6	17		0		0.00%
5	Fine	-	6-8			0		0.00%
6	Medium	ST	8 - 12	::		0		0.00%
7	Medium	GRAVELS	12 - 16			0		0.00%
8	Coarse	9	16 - 22	П		0	===	0.00%
9	Coarse		22 - 32	M:'		0		0.00%
10	Very Coarse	10	32 - 45	N:		0		0.00%
11	Very Coarse	13	45 - 64	M.		0		0.00%
12	Small		64 - 90	X::		0		0.00%
13	Small	COBBLES	90 - 128	.7		0		0.00%
14	Large	Co	128 - 180	7		0		0.00%
15	Large		180 - 256			0		0.00%
16	Small		256 - 362	*		0		0.00%
17	Small	ERS	362 - 512			0		0.00%
18	Medium	BOULDERS	512 - 1024			0		0.00%
19	Large	8	1024 - 2048			0		0.00%
20	Bedrock		> 2048			0		0.00%
21	Total # Samples			0	0	0	0.00%	

		Stream Read	h Assessmer	nt Form		Revision 3/20
Station ID:	MIZMEDELOS		10-03	Site Visit Code:	12 1700	
	On Tall Call		ow Incist	_		
Waterbody: _		- 4E (1-1 100 H) - 5E 1			0	
Waterbody S	eg ID:		Personnel:	Laiden	Savieway)	
Station ID's o	n reach:					
8 = channel s		cutting occurring; old dow nial riparian vegeta.:on w				
model) 6 = channel h	as evidence of old do	wncutting that has begun evident. (Stage 4).	stabilizing, vege	tation is beginning t	o establish, ever	at the base
		present. Immediate acti	on may prevent	further degradation	(early Stage 2).	
2 = unstable.	channel incised, active	ely widening, limited new pioneer species. Bank fa	riparian area/flo	odplain, floodplain n		i. The
0 = channel de	eeply incised, resemb	ling a gully, little or no ripo d plain. Tributaries will al	arian area, active	downcutting is cle	arly occurring. C Stage 2)	only occasions
		ould nearly always keep				2
Actual Score:		Potential Score:	8			
Comments						200
Question 2, F	Percent of Streambar	nks with Active Lateral	Cutting:			
		nks with Active Lateral ance with the stream and				
= the lateral	bank erosion is in bala		its setting			
s = the lateral is a r	bank erosion is in bala ninimal amount of acti	ance with the stream and	its setting courring			
= the lateral i = there is a r = there is a r	bank erosion is in bala ninimal amount of acti	ance with the stream and we lateral bank erosion o ctive lateral bank erosion	its setting courring	*		
5 = the lateral i 4 = there is a r 2 = there is a r	bank erosion is in bala ninimal amount of acti noderate amount of ac	ance with the stream and we lateral bank erosion o ctive lateral bank erosion	its setting courring occurring			
5 = the lateral if 4 = there is a r 2 = there is a r 5 = there is exc	bank erosion is in bala ninimal amount of acti noderate amount of ac	ance with the stream and ive lateral bank erosion oc ctive lateral bank erosion rosion occurring	its setting courring occurring			
5 = the lateral it is a received the state of the state o	bank erosion is in bala ninimal amount of acti noderate amount of ac cessive lateral bank er	ance with the stream and ive lateral bank erosion oc ctive lateral bank erosion rosion occurring	its setting courring occurring	Supplied by the	Watershed:	
= the lateral i = there is a n = there is a n = there is exc ctual Score: comments uestion 3, Th = the stream	bank erosion is in bala minimal amount of acti noderate amount of ac cessive lateral bank er	ance with the stream and ive lateral bank erosion octive lateral bank erosion rosion occurring Potential Score: ace with the Water and 3 diment/bedioad deposition	its setting courring occurring			s as would be
= the lateral = there is a n = there is a n = there is a n = there is executed Score: comments uestion 3, Th = the stream pected in a s	bank erosion is in bala minimal amount of acti noderate amount of ac cessive lateral bank er he Stream is in Balan exhibits no excess se- table, dynamic system	ance with the stream and ive lateral bank erosion octive lateral bank erosion rosion occurring Potential Score: ace with the Water and 3 diment/bedioad deposition	its setting courring occurring	urs on point bars ar	nd other locations	s as would be
= the lateral i = there is a n = there is a n = there is excitual Score: ctual Score: cumments = the stream opected in a s = sediment cl	bank erosion is in bala minimal amount of acti noderate amount of ac cessive lateral bank er he Stream is in Balan exhibits no excess se- table, dynamic system	ance with the stream and the lateral bank erosion of ctive lateral bank erosion rosion occurring Potential Score: ace with the Water and Signment/bedload depositions	its setting courring occurring	urs on point bars ar	nd other locations	s as would be
= the lateral i = there is a n = there is a n = there is excitual Score: ctual Scor	bank erosion is in bala minimal amount of acti moderate amount of accessive lateral bank er deessive lateral bank er and bank er and bank erosion excess se table, dynamic system logged gravel's are ap-	ance with the stream and the lateral bank erosion of ctive lateral bank erosion rosion occurring Potential Score: ace with the Water and Signment/bedload depositions	its setting courring occurring Sediment Being n, sediment occur or other evidence	urs on point bars ar	nd other locations	s as would be
= the lateral i = there is a n = there is a n = there is a n = there is excitual Score: cumments = the stream expected in a s = sediment cl = mid-channe = stream is br	bank erosion is in bala minimal amount of acti moderate amount of accessive lateral bank er deessive lateral bank er and bank er and bank erosion excess se table, dynamic system logged gravel's are ap-	ance with the stream and ive lateral bank erosion octive lateral bank erosion rosion occurring Potential Score: nce with the Water and 3 diment/bedioad deposition parent in riffles or pools,	its setting courring occurring Sediment Being n, sediment occurring or other evidence or other evidence	urs on point bars ar	nd other locations	s as would be
tended to the second of the se	bank erosion is in bala minimal amount of acti moderate amount of acti cessive lateral bank er cessive lateral bank er me Stream is in Balan exhibits no excess se table, dynamic system logged gravel's are ap all bars are common raided (except natural	ance with the stream and the lateral bank erosion octive lateral bank erosion rosion occurring Potential Score: ace with the Water and 3 diment/bedload deposition parent in riffles or pools, by occurring braided systems.	its setting courring occurring Sediment Being n, sediment occurring or other evidence or other evidence	urs on point bars ar	nd other locations	s as would be
= the lateral = there is a n = there is a n = there is excitual Score: comments uestion 3, Th = the stream opected in a s = sediment cl = mid-channe = stream is br stual Score:	bank erosion is in bala minimal amount of acti moderate amount of acti cessive lateral bank er cessive lateral bank er me Stream is in Balan exhibits no excess se table, dynamic system logged gravel's are ap all bars are common raided (except natural	ance with the stream and the lateral bank erosion octive lateral bank erosion rosion occurring Potential Score: ace with the Water and 3 diment/bedload deposition parent in riffles or pools, by occurring braided systems.	its setting courring occurring Sediment Being n, sediment occurring or other evidence or other evidence	urs on point bars ar	nd other locations	s as would be

			- the Madison	
		Hold Water and Act as a F		
			ter and act as a rooting medium	
2 = 65% to 85% of	the riparian area wi	h sufficient soil to hold water	and act as a rooting medium	
1 = 35% to 65% of	the riparian area wi	h sufficient soil to hold water	and act as a rooting medium	
0 = 35% or less of t	he riparian area wi	sufficient soil to hold water	and act as a rooting medium	
Actual Score:	_3	Potential Score:		
Comments				
5.000.000		COLUMN TO SE SUS		
ratings for most ri	parian, and other,	species)	eep, Binding Rootmass: (see Appendix I for	stability
6 = more than 80%	of the streambank	comprised of plant species w	th deep, binding root masses	
4 = 60% to 80% of t	he streambank cor	prised of plant species with o	leep, binding root masses	
2 = 30% to 60% of t	he streambank cor	prised of plant species with o	leep binding root masses	
0 = less than 30% o	f the streambank o	emprised of plant species with	deep binding root masses	
Actual Score:	6	Potential Score:		
Comments	-			
Continuento				
Question 6, Weeds				
3 = No noxíous wee				
2 = 0-1% of the ripa				
1 = 1%-5% of the rip				
0 = over 5% of the ri	parian area has no	dous weeds		
Actual Score:		Polential Score:		
Comments				
Question 7, Disturb	ance-Caused Und	esirable Plants:		
1 = 1% or less of the	riparian area has	ndesirable plants		
2 = 1%-5% of the rip				
= 5%-10% of the ri				
= over 10% of the				
Actual Score:	1	Potential Score:		
Comments				
right Hall Hall	11.			
		2	99	AF.xts

Ouestion 8, Woody Species Establishment and Regeneration: (Note: Skip this question if the riparian area has no potential for woody species) 8 = all age classes of native woody riparian species present (see table, Fig 2) 5 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for tree and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species or destination of the committee. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be revaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian oflive and/or saft codar. Actual Score: Potential Score: 8 Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 2 = 25%-50% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed. 2 = 25%-50% of the available second year and older stems are browsed. 3 = 5%-25% of the available second year and older stems are browsed. 4 = 0-5% of the special second year and older stems are browsed. 5 = 85%-65% of the available second year and older stems are browsed. 6 = 85%-75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 10%-10%-10%-10%-10%-10%-10%-10%-10%-10%-		
6 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for tree and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incleament, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be revaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or sal codar Actual Score: Potential Score: Potential Score: Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 3 = 5 - 25 - 25 - 25 - 25 - 25 - 25 - 25		
B = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for tree and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be revaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or sal codar Actual Score: Potential Score: Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed. 3 = 5%-25% of the available second year and older stems are browsed. 4 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = 25%-50% of the available second year and older stems are browsed. 3 = 5%-25% of the available second year and older stems are browsed. 4 = 100 + 100	8 = all age classes	of native woody riparian species present (see table, Fig 2)
or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be nevaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or safectar. Actual Score: Potential Score: Potential Score: Potential Score: Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0.5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 2.5%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Comments Cover in the Riparian Area/Floodplain and Streambank: 1 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 168%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 168%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 168%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 168%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 168%-75% of the riparian/wetland plant cover has a stability	6 = one age class o	of native woody riparian species clearly absent, all others well represented. For sites with potential for trees
One some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be nevaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or safe codar Actual Score: Potential Score: Potenti	4 = two age classes or the stand is comp	of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented prised of mainly mature, decadent or dead plants
evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or sat codar Actual Score: Potential Score:	2 = disturbance indu dominate. Re-evalu	uced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species uste Question 1, incisement, if this has happened.
Ouestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" growth form, or they are high-fined or umbrella shaped. 0 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score: Potential Score: Potential Score: 2 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10% of the riparian/wetland plant cover has a stability rating ≥ 6	evaluated to ensure	ecies present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt
Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" growth form, or they are high-lined or umbrella shaped. 0 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score: Potential Score: Potential Score: Guestion 10, Riparian/Wetland Vegetative: Cover in the Riparian Area/Floodplain and Streambank: 8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10	Actual Score:	Potential Score: S
species) 4 = 0-5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" growth form, or they are high-lined or umbreilla shaped. 0 = there is noticeable use (10% or more) of unpaiatable and normally unused woody species. Actual Score: Potential Scor	Comments	
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3 = 5%-25% of the available second year and older stems are browsed. 2 = 25%-50% of the available second year and older stems are browsed. 3 = more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" growth form, or they are high-lined or umbrella shaped. 3 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. 4 Potential Score: 4 Potential Score: 5 Potential Score: 6 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 = 10 = 10 = 10 = 10 = 10 = 10 = 10 =	4 = 0-5% of the avai	liable second year and older stems are browsed
e = 25%-50% of the available second year and older stems are browsed. = more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" prowth form, or they are high-lined or umbrella shaped. = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Potential Score:		
= more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" prowth form, or they are high-lined or umbrella shaped. = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Cotual Score:		
Actual Score: Potential Score: Actual Sc	more than 50%	of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed"
Comments Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: a 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 a 55%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 a 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 a 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 a less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 a ctual Score: Potential Score:	= there is noticeab	ele use (10% or more) of unpalatable and normally unused woody species.
Comments Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 3 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 10 = 10 = 10 = 10 = 10 = 10 = 10 = 1	Antini Consor	4 Potential Score: 4
Comments Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 3 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = Less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = Less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = Less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6	Actual Score:	
Comments Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 3 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = Less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = Less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = Less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6		grand butter methodol ag long i preades
8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 8 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 8 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6	Comments	V- V
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3 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 4 Actual Score: Potential Score:	Question 10, Ripar	ian/Wetland Vegetativu Cover in the Riparian Area/Floodplain and Streambank:
= 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 ctual Score: Potential Score:	= 85% or more of t	he riparian/wetland plant cover has a stability rating ≥ 6
= 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 ctual Score: Potential Score:	= 75%-85% of the	riparian/wetland plant cover has a stability rating ≥ 6
= 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 ctual Score: Potential Score:	= 65%-75% of the	riparian/wetland plant cover has a stability rating ≥ 6
= less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 ctual Score: Potential Score: 8	= 55%-65% of the	riparian/wetland plant cover has a stability rating ≥ 6
ctual Score: 4 Potential Score: 8		
Comments	ctual Score:	Potential Score: 8
	\	
	Ammenta	

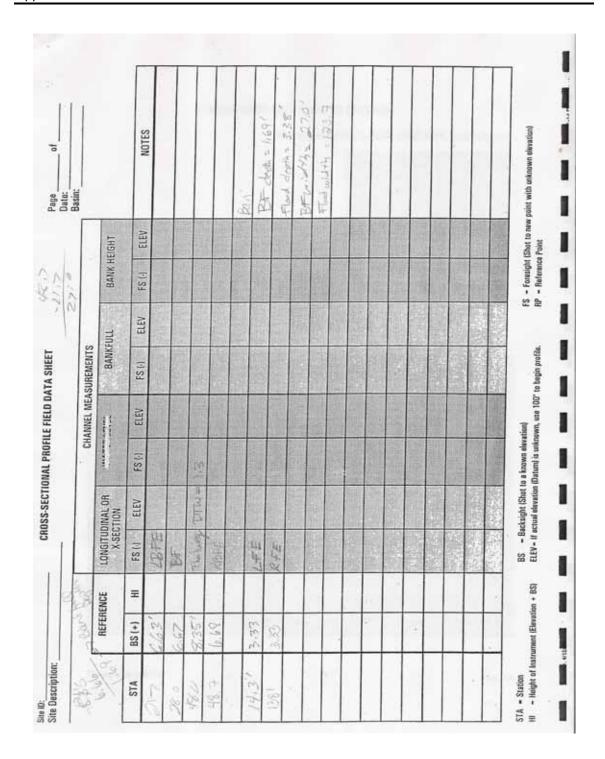
Question 11, Ri	parian Area/Floodplain Character	ristics are Adeq ate to	Dissipate Ene	rgy and Trap Sedin	nent.
	or overflow channels, large rock, or				3.0.0
	is little surface erosion and no evid				
	ere are no headcuts where either or				
	roody material is present, but gener				
	sional evidence of surface erosion.				trapping
2 = inadequate ro	ock and/or woody material available casional headcuts where overland	for dissipation of energ	y or sediment tra	apping. There is sur	face erosion
					2)
material suitable substrate materia	floodplain lacking any of these attril for energy dissipation and sedimen its adequate to resist further erosion the potential to create meander cu	t trapping. Erosional an n. Surface erosion is ob	eas are long and	continuous. Lackir	ng vegetation
ctual Score:		Score:			
Cipili Goore.					
					_
Comments					
		SUMMARY			
					Potential
			Actual Score	Possible Points	Score
JESTION 1:	Stream Incisement		0	0, 2, 4, 6, 8	0
UESTION 2:	Lateral Cutting		0	0, 2, 4, 6	0
	Stream Balance		0	0, 2, 4, 6	0
UESTION 3:			- 0		0
UESTION 4:	Sufficient Soil			N/A, 0, 1, 2, 3	1.00
UESTION 5:	Rootmass		0	N/A, 0, 2, 4, 6	0
UESTION 6:	Weeds		0	0, 1, 2, 3	0
JESTION 7:	Undesirable Plants		0	0, 1, 2, 3	0
JESTION 8:	Woody Species Establishment		0	N/A, 0, 2, 4, 6, 8	0
JESTION 9:	Browse Utilization		0	N/A, 0, 1, 2, 3, 4	0
JESTION 10:	Riparian/Wetland Vegetative C	over*	0	N/A, 0, 2, 4, 6, 8	0
JESTION 11:	Riparian Area/Floodplain Chara	acteristics *	0	N/A, 0, 2, 4, 6	0
		Total	0	61	0
tantial Cases for	most Bedrock or Boulder streams		0	(32)	0
genual Score for	(questions 1, 2, 3, 6, 7, 11)			(05)	-
tential Score for	most low energy "E" streams		0	(49)	0
	(questions 1 - 7, 10, 11)				
TING: =	Actual Score	X 100 = % rating	#DIV/OI		
	Potential Sco	re			
145 03	TO LOOK OF STREET				
	80-100% = SUSTAINABLE				
	50-80% = AT RISK	HEREE TO SERVICE TO SE			
	LESS THAN 50% = NOT SUST	AINABLE			
only in certain, sp	oecific situations can both of these	receive an "N/A".			
		4			SRAF via

	Montana Dep	artment of Enviro	nmental Quality	Supplemental Questi	ons
The score for these Note: Answers to the	guestions does n	ot have an effect on	the rating above.		
				question 12 will be avera	ped
12a Adult and Juv	enile Helding/E	scape Cover		oot wads, undercut bank	
			etation, comocis, n	oot wada, undercut bank	a discrot aquabo
6 = Fish habitat is co			Name and for many the d	labele undersut banks a	indianalan unantation
boulders, root wads	and/or aquatic ve	getation are of limite	d supply.	debris, undercut banks, o	vernanging vegetation.
2 = Pools and habita			or there are fish barr	iers.	
0 = There is not enou					
N/A = Stream would	not support fish u	under natural conditio	ins		
Actual Score:		Potential Score:	-8		
Comments					
12b. Habitat Compl	exity	eer turnee in program!	High flow invenile as	nd adult refugia are prese	ant.
6 = A mixture or juve 3 = Primarily adult or					No.
3 = Primarily adult or 0 = High flow refugia		and broading tag			
N/A = Stream would i		nder natural conditio	ns		
	iot support non o	Potential Score:			
Actual Score:		Totolina Goorg.			
Comments					
12c. Spawning Hab	itat (salmonid st	treams only)	wning areas, and co	imposition of spawning su	ibstrate are excellent.
				quality of spawning subs	
				quality of spawning subs	
N/A = Stream would r					
Actual Score:	2	Potential Score:	1)		
TUIDE SUITE.		, ordinal coordi			
Comments					
_ : :					
			+		
			5		SRAF.xds

8 = No potential fis	ge h passage barriers apparent.
	assage barriers present.
	d not support fish under natural conditions.
Actual Score:	Potential Score:
Comments	
12e. Entrainment	fish into water diversions not an issue.
	fish into water diversions may be a moderate issue.
	fish into water diversions may be a major issue.
Actual Score:	8 Potential Score: 8
Comments	
12a-e Avg. Score	Actual Score 0 Potential Score 0
Question 13. Sola	r Radiation
	of the stream reach is adequately shaded by vegetation.
6 = More than 75% 4 = 50-75% of the s	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation,
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade.
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc.
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75%	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score:	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc.
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc.
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score:	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score:
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score:
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score: Potential Score: growth / Nutrients ent. Rocks are slippery.
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 8 = Algae not appare 9 = in small patches	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably virrigation, etc. Potential Score: Potential Score: growth / Nutrients ent. Rocks are slippery. or along channel edge
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 1 = in small patches 2 = in large patches	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score: property of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. property or growth / Nutrients ant. Rocks are slippery. or along channel edge or discontinuous mats
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 1 = in small patches 2 = in large patches	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably virrigation, etc. Potential Score: Potential Score: growth / Nutrients ent. Rocks are slippery. or along channel edge
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 1 = in small patches 2 = in large patches	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score: property of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. property or growth / Nutrients ant. Rocks are slippery. or along channel edge or discontinuous mats
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 8 = Algae not appare 9 = in small patches 9 = Mats cover botto 8/A = No water	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score: property of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. property or growth / Nutrients ant. Rocks are slippery. or along channel edge or discontinuous mats
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 1 = in small patches 2 = in large patches 3 = Mats cover botto 1/A = No water	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score: percent / Nutrients ent. Rocks are slippery. or along channel edge or discontinuous mats m (hyper enriched conditions) or plants not apparent and rocks not slippery (toxic conditions) Potential Score: Potential Score:
6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 8 = Algae not appare 9 = in small patches 9 = in large patches 9 = Mats cover botto	of the stream reach is adequately shaded by vegetation. tream reach does not have adequate shading or the water temperature is probably elevated by irrigation, 5-50% of the stream does not have adequate shade. of the stream reach does not have adequate shade by vegetation or the water temperature is probably irrigation, etc. Potential Score: Potential Score: or along channel edge or discontinuous mats m (hyper enriched conditions) or plants not apparent and rocks not slippery (toxic conditions) Potential Score: Potential Score:

		If the live were to be used to the second patterns of the second pat	nd/or water adar
	lace oils, turbidity	y, salinization, precipitants on stream bottom a	maror water odor
6 = none			
4 = Slight			
2 = Moderate			
0 = Extensive			
N/A = No water	1		
Actual Score:	10	Potential Score:	
Comments			
Question 16. Bact			
4 = There are no kn			
2 = Likely sources o	f bacteria are prese	ent. Wastewater or concentrated livestock operat	ions are the most common sources.
0 = Feedlots are cor	nmon or raw sewa	ge is entering the stream	
Actual Score:		Potential Score:	
Comments			
Question 17. Mac	roinvertebrates		
4 = The stream has flies, caddis flies and	a healthy and diver	se community of macroinvertebrates. Stream riffle	es usually have an abundance of may
2 = The stream is do	minated by pollution	on tolerant taxa such as fly and midge larva.	
0 = Macroinvertebrat	es are rare or absr	ent	
N/A = Stream reach			
Actual Score:	_4_	Potential Score:	
2			
Comments	-		*
		7	SRAF.xds
		50	W 171 - W 1

Question 18. Irrig Evaluate effects from	ation in acts om de-watering	(Assess during critical or inter-basin transfer o	low flow periods or you f water.)	may need to inquire local	ly about this.
8 = There are no no	oticeable impac	ts from irrigation			
6 = Changes in flov organisms.	v resulting from	irrigation practices are	noticeable, however flo	ws are adequate to suppo	ort aquatic
4 = Flows support a	aquatic organisa	ms, but habitat, especial	ly riffles are drastically	reduced or impacted.	
2 = The flow is low	enough to seve	erely impair aquatic orga	nisms		
0 = All of the water	has been diver	ted from the stream			
N/A = Stream reach	n is ephemeral.				
Actual Score:	_ 2	Potential Score:	-4		
Comments					
Question 19. Land	duse activities	- Sources			
appear to be natura	l.			parian vegetation. Any imp	
5 = There are some imber harvesting, u	signs of impac rban, roads, etc	t from landuse activities c.	such as grazing, dryla	and agriculture, irrigation, f	eedlots, mining,
= Impacts from lar	nduse activities man induced er	are obvious and occur osion, saline seeps or o	throughout most of the vergrazing within the w	stream reach. For examp vatershed.	ole, there are
overwhelming evide	nce that the str	eam is impaired.		to documentation would p	
 Land use impact capable to support n 	ts are so intrusi nost forms of a	ve that the stream has I quatic life	ost most of its natural f	features. The stream doe	s not appear to be
Actual Score:	4	Potential Score:	1		
	- SACE	Nent manage	(W)		
Comments	-	· ·			
otal Actual	0	Total Potential	0		
IATING	Total Potential	x 100	#DIV/01		
VERALL RATING		(Total NRCS Actual + (Total NRCS Potential			#DIV/0!
	75-100% = SI 50-75% = AT LESS THAN !		BLE		



Waterbody Name		(One Station per page)	Trip ID: 3-DOS- Debello Date: 7-25-23 Personnel: La data / 355-75
Station ID My 2 mc	Mchalle Tool Doubler	County Leads	Posers Pass
at/Long obtained by me	thod other than GPS? Y \ \	Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	GPS Datum (Circle One): (NAD 27 NAD 83 WGS84 what is the map scale?)
Samples Taken:		Samula ID ditto r	11
Water	Nutrients Metals Commons M		Sample Collection Procedure
Sediment		+	GRAB
Macroinvertebrate N	Macroinvertebrate Habitat Asmt	102 A1000 an	SED-1
Algae/Macrophytes	_	20.00	KICK HESS OTHER:
Chlorophyll a		1000	PERI-1 OTHER:
Habitat Assessment	Stream Reach Asmt. Other		CHLPHL-2 OTHER
Substrate	Pebble Count 7 % Fines		Purpose: The Purpose:
Transect			
Photographs			
Field Notes			
Other			
Measurements: Th	Time: 1 30	Marroinmanahana Vistor	
Q / Flow (cfs)	[51.7]	Site Vicit Community	Kick Length (Ft.):
Temp: (C) W	SGPC A	ore that comments:	
pH:	000		alfa mushaca e
SC: (mS/cm)	150	WALL TO SERVICE	alto same a successed
SC x 1000 =	Imho/cm	P. DAILDE	2
DO: (mg/L)	Dr. St. Ag 15 1 45 5 27 N		
UR: Clear Slight	TUR: Clear Slight Turbid Opaque		
Turbidity Comments:	0,23 5 0.68		

	Waterbody:	MFD @	Losees	Page	Station ID:	MIZMIDERO
1	Personnel:					
	"Distance from initial point	**Depth	"Velocity (at point)	"Width	**Area	"Discharge
1	6,8 150	0.10	0			
2	1.0	0,10	G.			
3	15	0.20	0.04			
4	20	0120	0,08			
5	25	0.20	0.40			
6	3.6	0.30	0,34			
7	3.5	0,30	0,41			
8	4,0	030	0,48			
9	4,5	0.25	0,31			
10	5,0	0.25	0.78			
11	5.5	0.25	0,60			
12	65	0.25	8,50			
13	6,5	0120	0,18			
14	7.0	0,120	123			
15	75 RE	0,10	0			
16						
17						
18						
9						
20						
1						
2						
3						
4						
5						
6						
7						
8						
9						
0						

	tota	ENT FIELD FORM	12000	E/RUN PREVALENCE
Date:	35 42 5105	The second secon	63-6727	
Waterbody: // T	De Koges P	235	Site: MIRMEDE	1036
Personnel:				
HABITAT		0110 00001111		
PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed riffle; riffle as wide as stream & extends two times width of stream.	Riffle as wide as stream but length less than two times width.	Reduced riftle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
IA. score:	9-10 /O	6-8	3-6	0-2
Comments:				
18. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine graves, or sand prevalent	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravel, sand, silt, or bedrock substrate.
IB. score:	9-10 /0	6-8	3-5	0-2
Comments:				
2. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 6.35 mm [.25"]).	Gravel, sobble, or bookler particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
L score:	16-20	11-15	6-10	0-5
Comments:				
Channel Alteration (channelization, straightening, dredging, other alterations)	Channel atterations absent or minimal; stream patjern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past afterations (before past 20 years) may be resent, but more recent channel alteration is not present.	New embiankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gablion or cement; over 30% of the stream reach channelized & disrupted.
score:	16-20 /-7	11-15	6-10	0-5
Comments:				
4. Sediment Deposition	Little or no enlargement of bars & less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old & new bars; 30- 50% of the bottom affected; sediment deposits at obstructions, constrictions, & bends; moderate deposition in pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent the to substantials sediment deposition.
score;	16-20 /-9	11-15	6-10	0-5
Comments:				

E. Bank Stability (score each bank) NOTE: Determine left or right side which for luture problems. Score: 9-10 6-8 Average: Comments: 7, Bank Vegetation (roce each bank) NOTE: reduce covered by stabilizing vegetation (access which do not hard sold or naturally. NOTE: reduce covered by stabilizing vegetation (shore each bank) NOTE: reduce covered for manual crops a weeds which do not hard sold sold services for annual crops a warpawedt). Score: 9-10 6-8 3-5 O-2 Left Side Comments: 7, Bank Vegetation (roce each bank) NOTE: reduce covered by stabilizing vegetation (shore each bank) NOTE: reduce covere for annual crops a weeds which do not haid soil weelf (e.g. Anapweedf). Score: 9-10 6-8 3-5 O-2 Left Side Average: Comments: Comments: Comments: Average: Comments: Width of vegetated zone yellothed or vegetation or well on the legit evident. Left Side Average: Vegetated Zone Wildth (score weath side) Right Side Comments: Comments: Average: Problems of the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on the streambank surfaces covered by vegetation; discription or well on t	5. Channel Flow Status	Water fills baseflow channel; minima amount of channel substrate exposed,	Water fills > 75% of the baseflow channel; < 25% channel substrate exposed.	Water fills 25-75% of the baseflow channel; riffle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
Earks stable; no evidence of erosion or bank failure; little apparent potential for future problems. Earks stable; no evidence of erosion mostly healed or bank failure; little apparent potential for future problems. Determine left or right side while facing downstream. Earls Side Right Side Comments: T. Bank Vegotation process each bank) NOTE: request along straight and affection process and bank NOTE: request along straight and affection process and bank NOTE: request along straight and affection process and bank NOTE: request along straight and affection process and bank NOTE: request along straight and affecting full plant growth potential to any great extent; more than one-half of potential plant height remaining. Score: 9-16 6-8 3-5 0-2 Left Side Comments: Right Side Bight Side Comments: Width of vegetated zone Width (score each side) Right Side Comments: Width of vegetated zone 30-100 feet. Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. Vegetated Zone Width (score each side) Right Side Comments: Right Side Comments: Right Side Comments: Right Side Comments: Average: Comments: Average: Average: Comments: Right Side Comments: Width of vegetated zone 10-30 feet. Vidith of vegetated zone 10-30 feet. Vidith of vegetated zone 10-30 feet. Average: Comments: Right Side Comments: Right Side Comments: Right Side Comments: Comments: Right Side Comments: Comments: Average: Comments: Average: Comments: Vidith of vegetated zone 10-30 feet. Vidith of vegetated zone 10-30 feet. Average:	. score:	16-20 /9	11-15	6-10	0-5
Earks stable; no evidence of erosion or bank failure; little apparent potential for future problems. Earks stable; no evidence of erosion mostly healed or bank failure; little apparent potential for future problems. Determine left or right side while facing downstream. Earls Side Right Side Comments: T. Bank Vegotation process each bank) NOTE: request along straight and affection process and bank NOTE: request along straight and affection process and bank NOTE: request along straight and affection process and bank NOTE: request along straight and affection process and bank NOTE: request along straight and affecting full plant growth potential to any great extent; more than one-half of potential plant height remaining. Score: 9-16 6-8 3-5 0-2 Left Side Comments: Right Side Bight Side Comments: Width of vegetated zone Width (score each side) Right Side Comments: Width of vegetated zone 30-100 feet. Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. Vegetated Zone Width (score each side) Right Side Comments: Right Side Comments: Right Side Comments: Right Side Comments: Average: Comments: Average: Average: Comments: Right Side Comments: Width of vegetated zone 10-30 feet. Vidith of vegetated zone 10-30 feet. Vidith of vegetated zone 10-30 feet. Average: Comments: Right Side Comments: Right Side Comments: Right Side Comments: Comments: Right Side Comments: Comments: Average: Comments: Average: Comments: Vidith of vegetated zone 10-30 feet. Vidith of vegetated zone 10-30 feet. Average:	Comments:		V		
or bank fallurs; little apparent potential for future problems. or bank fallurs; little apparent potential for future problems. Interquent, small areas of smodarate frequency & size of erosional areas; up to 60% of banks in reach have erosion; size of erosion scars or		marks of the second second	No. of the last of	Tax .	10
Left Side Right Side Comments Comments	each bank) NOTE: Determine left or right side while facing	or bank failure; little apparent	infrequent, small areas of erosion mostly healed	enoderate frequency & size of erosional areas; up to 60% of banks in reach have erosion; high erosion potential during	areas; "raw" areas frequent along straight sections & bends; obvious bank sloughing; 60-100% of banks have erosion scars on
Right Side Over 90% of the streambank surfaces covered by stabilizing vegetation; streambank surfaces covered by stabilizing vegetation; streambank surfaces covered by stabilizing vegetation; disruption on minimal or not evident, almost all plants allowed to short NOTE: reduce accres for annual crops & weeds which do not hold soil well (e.g. knapweed). Score: 9-10 6-8 3-5 0-2 Wright Side Average: Right Side Right Side Right Side Right Side Comments: Comments 10-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or conwoon; less on eless. Less than 50% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or conwoon; less on eless. Lett Side Average: Wright of vegetated zone Wright of vegetated zone Wright of vegetated zone Vidith of vegetated zone Vidith of vegetated zone Laft Side Right Side Comments: Comments Average: Comments Average: Right Side Comments:	score:	9-10 //	6-8	3-5	0-2
Right Side Over 90% of the streambank surfaces To 50% of the streambank surfaces covered by stabilizing vegetation; regetative disruption minimal or not bank). NOTE: reduce grow naturally. Secore: 9-10 Left Side Vegetated Zone Width (score each side) Right Side Over 90% of the streambank surfaces streambank surfaces covered by vegetation; regetative disruption minimal or not including the streambank surfaces covered by vegetation; disruption obvious; disruption of patches of bars soil or closely cropped vegetation; vegetation; removed to 2 inches or leass. Left Side Average: Comments: Width of vegetated zone 30-100 feet. Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. Right Side Right Side Comments:		Left Side 10		10	
Right Side Over 90% of the streambank surfaces 70-50% of the streambank surfaces covered by stabilizing vegetation; streambank surfaces streambank surfaces covered by stabilizing vegetation; disruption evident, but not affecting full plant on the affecting full plant on the streambank surfaces covered by vegetation; disruption evident, but not affecting full plant on the affecting full plan				10	
7. Bank Vegetation Protection (score each bank) NOTE: reduce bank) NOTE: reduce bank) NOTE: reduce covered by stabilizing vegetation; vegetative disruption minimal or not proved at a plants allowed to grow naturally. Score: 9-10 1-		Right Side //			
Left Side / Average: / Width of vegetated zone > 100 feet. Vegetated Zone Width (score each side) Score: 9-10 6-8 3-5 0-2 Left Side / Average: / Right Side / Comments:	Protection (score each bank) NOTE: reduce scores for annual crops & weeds which do not hold soil well (e.g.	covered by stabilizing vegetation; vegetative disruption minimal or not evident; almost all plants allowed to	streambank surfaces covered by vegetation; disruption evident, but not affecting full plant growth potential to any great extent; more than one-half of potential plant	attrambank surfaces covered in vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of potential	streambank surfaces covered by vegetation; extensive disruption of vegetation; vegetation removed to 2 inches or
Right Side Right Side Convents: Width of vegetated zone Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. Vidth of vegetated zone	score;	9-10	6-8	3-5	0-2
Right Side Comments: Vegetated Zone Width of vegetated zone > 100 feet. Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. Vidth of vegetated zone Vidth of vegetated zone Vidth of vegetated zone 10-30 feet. Vidth of vegetated zone Vidth		Left Side 10		10	
Vegetated Zone Width (score each side) 30-100 feet. 10-30 feet. < 10 feet.		Right Side 7/2			
Left Side Average: 7,5		Width of vegetated zone > 100 feet.			
Left Side Average: 7,5	scorec	8-10	6.8	1.6	
Right Side Comments:					0-2
Right Side ///		7		7/5	
OTAL SCORE: Score compared to maximum possible:		Right Side	Comments:		
	OTAL SCORE:		Score compared to	o maximum possibl	e:

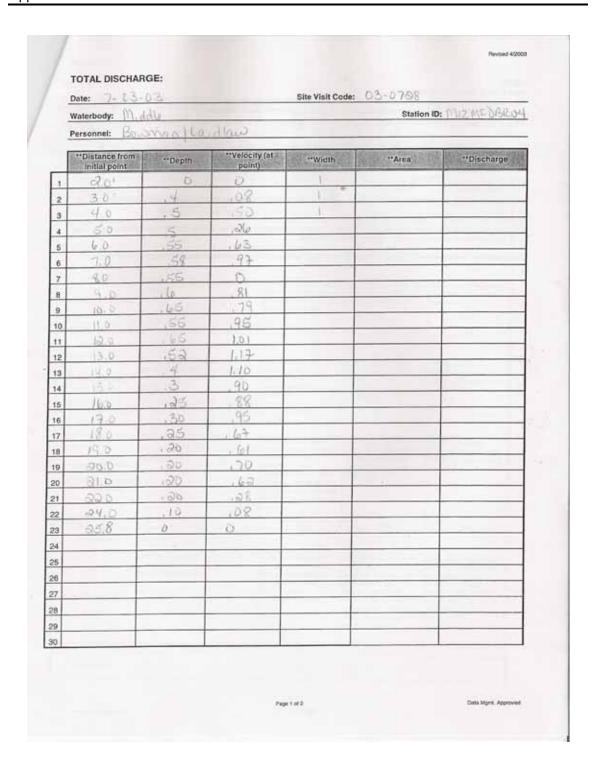
				Personnel: Landad / Countries
Waterbody Name Station ID N.12	A ST	Visit# 2	Location Release 434	Clo. L HUC /0050/03
Lat/Long obtained by	y met	Long	Lat Long Long Long Verified? By GPS Datum (Circle Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	GPS Datum (Circle Oue): (NAD 27 NAD 83 WGS84 what is the map scale?)
Samples Taken:			Sample ID/Ette Location.	1
Water	Ø	Nutrients Metals Commons		Sample Collection Procedure
Sediment				Servi
Macroinvertebrate	Ø	Macroinvertebrate Habitat Asmt	O.3+ 63a9ac	office stress
Algae/Macrophytes		-		
Chlorophyll a	-	-		PERI-L OTHER:
Taking Assessment			1	CHLPHL-2 OTHER:
bitat Assessment		Stream Reach Asmt. Other		Purpose: Take N
Substrate		Pebble Count % Fines		
Transect				
Photographs				
Field Notes				
Other				
Measurements:	Th	Time: 14/5	Macroinvertebrate Kick Duration:	V7 414 Vibiliand On ACI
Q / Flow (cfs)		Est	Site Visit Comments:	New Long of Ch.):
Temp: (C)	×	30.58C A	000000000000000000000000000000000000000	
pH;		to y		
SC: (mS/cm)		.34		
SC x 1000 =		mpho/cm		
DO: (mg/L)		9.93 100.890		
JR: Clear Sh	ight	TUR: Clear Slight Turbid Opaque		
Turbidity Comments:	1.0	1.23 1070		
100	1.0	24 1010		

			Draibon B	20w 434	Station ID:	MIZNEBRO
1	Personnel:	udiaw P	blowan			
	"Distance from initial point	**Depth	"Velocity (at point)	**Width	**Area	"Discharge
1	3, FEM	0	0			
	31	0.20	0			
	41	0.3	405			
	5	0.45	0.75			
	6	0,3	0,80			
	7.0	0,5	100			
1	8.0	0.45	0,67			
1	9.0	0.50	0,50			
1	10.0	0.45	8			
)	11.0	0.40	0,29			
4	12.0	0,40	0,62			
2	13.0	0,40	0,61			
3	19.0	0,45	0.91			
+	15.0	0.45	1.09			
-	17.0	0,50	1,47			
-	18,1	0.47	0.72			
3	19,0	0.50	0.93			
,	25.0	0.35	0.46			
1	21,0	0.35	0,8/			
1	220	0,30	0.48			
T	23.0	0,30	0,48			
	24.0	0,20	6136			
T	25.0	0,15	0,11			
T	26.0	0,10	0,01			
	26.7 REW	0	0			
T	ATTION IN					

21.1.1.12 ******************************	BRATE HABITAT ASSESSM	ENT EIEI D FORM	DIETI I	URUN PREVALENCE
MACROINVERTEE	SKATE HADITAT ASSESSM			TRUN PREVALENCE
Date:	23/03	Site Visit Code:	03-0729	
Waterbody: //	FD @ Marphy's	101- Huy 434	Site: [] [] [] []	34.02
Personnel:				
HABITAT		T	100	
PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL Reduced riffle area that	POOR
1A. Riffle Development	Well-developed riffle; riffle as wide as stream 5 extends two times width of stream.	Riffle as wide as stream but length less than two times width.	is not as wide as stream & its length less than two times width.	Riffles virtually men- existent
IA. score:	9.10 9	6-8	3-5	9-2
Comments:				
18. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent.	Substrate dominated by bedrock, boulders, sand, or sitt; cobble present.	Monotonous fine gravet, sand, silt, or bedrock substrate.
18, score:	9-10	6-8 %	3-5	0-2
Comments:				
2. Embeddedness	Gravet, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 6-35 mm [_25*]).	Gravel, cobble, or boulder particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravet, cobble, or boulder particles are over 75% surrounded by fine sediment.
2. score:	16-20	11-15	6-10	0.5
Comments:				
Channel Alteration (channelization, straightening, dredging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past alterations (before past 20 years) may be resent, but more recent channel alteration is not present.	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Bariks shored with gablion or cement; over 80% of the stream reach channelized & disrupted.
l. score:	16-20 1%	11-15	6-10	0-5
Comments:				
4. Sediment Deposition	Little or no enlargement of bars & less than 3% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravet; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravet, coarse sand on old & new bars; 36- 50% of the bottom affected; sediment deposits at obstructions, constrictions, & bends; moderate deposition in pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools elmost absent due to substantial sediment deposition.
L score:	16-20	11-15 19	6-10	0-5
Comments:				

5. Bank Stability (acore each bank) NOTE: Determine tell or right side while facing downstream. 2. Score: 2. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes & weeds which do not hank soll well (e.g. knapweed). 3. Score: 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes & weeds which do not hank soll well (e.g. knapweed). 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes & weeds which do not hank soll well (e.g. knapweed). 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes & weeds which do not hank soll well (e.g. knapweed). 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes & weeds which do not had soll well (e.g. knapweed). 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes which do not had soll well (e.g. knapweed). 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes which do not had soll well (e.g. knapweed). 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes which do not had soll well (e.g. knapweed). 5. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual cropes and protection (score each bank) NOTE: reduce scores for annual cropes and protection (score each bank) NOTE: reduce score for the growth potential to any croped ground extent; more than one-half of potential plant height remaining. 5. Bank Vegetation Protection Protection (score each bank) NOTE: reduce score for the streambank surfaces covered by vegetation (convert in vegetation (covered to soll vegetation extens) and provide potential to any croped (score each bank) NOTE: reduce soll vegetation (score eac	0-5 le; many eroded fraw" areas it along straight is & hends; is bank sloughing; & of banks have is sear on pes. 0-2 an 50% of the sank surfaces it by vegetation; we disruption of ion; vegetation of to 2 inches or
5. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. 5. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. 5. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. 5. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. 6. Score: 6. Bank Stability (score each bank) NOTE: 6. Bank Stability (score each bank) NOTE: 7. Bank Vegetation Protection (score each bank) NOTE: reduce each bank all plants allowed to grow naturally. 6. Bank Vegetation 6. Bank Stabilet (source) Stability (sour	raw" areas it along straight is & hends; is bank sloughing; is of banks have scars on pes. 0.2 an 50% of the sank surfaces by vegetation; ve disruption of ion; vegetation of
S. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. Secore: Secor	raw" areas it along straight is & hends; is bank sloughing; is of banks have scars on pes. 0.2 an 50% of the sank surfaces by vegetation; ve disruption of ion; vegetation of
Left Side Right Side Over 90% of the streambank surfaces covered by stabilizing vegetation; repotention (score each bank) NOTE: reduce evident; almost all plants allowed to grow naturally. T. Blank Vegetation of Protection (score each bank) NOTE: reduce evident almost all plants allowed to grow naturally. Secores for annual crops & weeds which do net hold soil well (e.g. knapweed). Score: 9-10 Average: Comments: Scorements: Scorement	en 50% of the sank surfaces I by vegetation; ve disruption of lon; vegetation
Right Side Over 90% of the streambank surfaces covered by stabilizing vegetation; vegetation; disruption minimal or not bank) NOTE: reduce scores for annual cropes & weeds which do not hold soil well (e.g. knapweed). Score: 9-10 Average: Comments: 10-70% of the streambank surfaces covered by vegetation; disruption orbinate surfaces covered by vegetation; disruption orbinate; patches of bare soil or closely cropped grow naturally. Score: 9-10 Average: 10-70% of the streambank surfaces covered by vegetation; disruption orbinate covered by vegetation; disruption orbinate; patches of bare soil or closely cropped growt extent; more than one-half of potential plant height remaining. In the streambank surfaces covered by vegetation; disruption orbinate covered in vegetation; disruption orbinate to any growth potential to any patches of bare soil or closely cropped great to common; less than one-half of potential plant height remaining. Score: 9-10 Left Side	sank surfaces if by vegetation; we disruption of ion; vegetation
7. Blank Vegetation Protection (score each bank) NOTE: reduces Sovered by stabilising vegetation; vegetation evident; almost all plants allowed to grow naturally. Scores for annual crops & weeds which do net hold soil well (e.g. knapweed). Score: 9-10 Comments: Comments: Comments: 10-70% of the streambank surfaces overed by vegetation; disruption evident, but provident; almost all plants allowed to grow naturally. Score: 9-10 Comments: Score 10-70% of the streambank surfaces overed in vegetation; disruption evident, but provident to any growth potential to any growth potential to any growth potential plant than one-half of potential plant than one-half of potential plant height evident. Score: 9-10 Score: 10-70% of the streambank surfaces covered in vegetation; disruption evident, but affecting full plant growth potential to any great extent; more than one-half of potential plant than one-half of potential plant height remaining. Left Side	sank surfaces if by vegetation; we disruption of ion; vegetation
7. Blank Vegetation Protection (score each bank) NOTE: reduces Scores for annual crops 4 weeds which do not hold soil well (e.g. knapweed). Score: 9-10 9	sank surfaces if by vegetation; we disruption of ion; vegetation
7. Bank Vegetation Protection (score each bank) NOTE: reduce Scores I annual crops & weeds which do not hold soil well (e.g. Knapweed). Score: 9-10 9-10 6-8 3-5 Left Side	sank surfaces if by vegetation; we disruption of ion; vegetation
Left Side 9	
	0-2
	7.00
Average:	
Right Side 9 Comments:	
8. Vegetated Zone Width of vegetated zone > 100 feet. Width of vegetated zone Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. 10-30 feet.	vegetated zone
score; 9-10 G-8 3-5	
Left Side GG GG	0-2
Comments Average: (4, 0) 2	
Right Side 9	
OTAL SCORE: Score compared to maximum possible:	

Waterbody Name MAGA Station ID (NYZANE DESEASE)		(One Mation per page)	Trip ID: 3003 DALON Date: 753 3
	Alle Fort Der Locali	DERDY Visit # 2 Location At Tracesul's Road	нис /2030/03
Long obtained by meth-	od other than GPS? Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	GPS Datum (Circle One): NAD 27 NAD 83 WGS84 what is the man scale?
Samples Taken:		Semala Dorter	11
Water	Nutrients	O 2 Man Divine Location:	Sample Collection Procedure
Sediment	all designations and the second	03/0/28/0	GRAB
Macroinvertebrate S	Macroinvertebrate Habitat Asmt Fol	62, 6356.00	SED-1
Algae/Macrophytes 🖂	Aquatic Plant Form	23-V (2611)	KICK HESS OTHER:
Chlorophyll a		0 00 0	PERI-1 OTHER:
Habitat Assessment	Stream Reach Arms Control		CHLPHL-2 OTHER:
	Pebble Court % Fine		Purpose: GWN
Transect			
Photographs			
Field Notes			
Other			
Measurements: Time:	3,00		
Q / Flow (cfs)	Est	Site Visit Comments.	Kick Length (Pt.): 70
Temp: (C) w	A 95	and the second	1
pH: Q	19	N TO LANGUEST OF THE PARTY OF T	Sampling 54 (collecte)
SC: (mS/cm)	297	DASON CHOLO	
SC x 1000 =	Imho/cm		
DO: (mg/L)	U / 102 H 01.5		
TUR: Clear Slight Turbid Opagane	Turbid T Opages		
Turbidity Comments:	OW 12 1 + 018 VE		
		100	



MACROINVERTE	BRATE HABITAT ASSESSM	ENT FIELD FORM	RIFFL	E/RUN PREVALENCE
Date: 7-23-01			× 03-6709	
Waterbody: [V]	The state of the s	ingc/salls	Site: //)/2/14FD	ROY
Personnel: Land	law Bromen	-		
HABITAT PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed riffle; riffle as wide as stream & extends two times width of stream.	Riffle as wide as stream but length less than two times width.	Reduced riffle area that is not as wide as stream \$ its length less than two times width.	Riffles virtually non- existent
A score: 8	9-10	64	3-5	0-2
Comments:				
18. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalen	Substrate dominated by bedrock, boulders, sand, or silt, cobble present.	Monotonous fine gravel, sand, slit, or bedrock substrate.
B. score: K	3-10	6-8	3.4	0-2
Comments:				
2. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 6.35 mm (.25")).	Gravel, cobble, or boolder particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75%, aurrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
score:	16-20	11-15	6-10	0-5
Commenta:				
Channel Alteration (channelization, straightening, dredging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past alterations (before past 20 years) may be resent, but more recent channel alteration is not present.	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gabion or cement; over 80% of the atream reach channelized & disrupted.
score: /3	16-20	11-15	5-10	0-5
Comments:	upstream bridge			
	Little or no enlargement of bars & less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from course gravel; 5- 20% of the bottom affected; slight deposition in pools.	new gravel, coarse sand on old & new bars; 30- 50% of the bottom affected; sediment deposits at obstructions, constrictions, & bends;	Heavy deposits of fine material, increased bar development, more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
score: 15	15-20	11-15	6-10	0-5
Comments:	depositor in glider	5 + people la	בוספי שמחם	sit.

5. Channel Flow Status	Water fills baseflow channel; minima amount of channel substrate exposed.	Water fills > 75% of the baseflow channel; < 25% channel substrate exposed,	Water fills 25-75% of the haseflow channel; riffle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
score: 16	16-20	11-15	5-10	0-5
Comments:				
	Banks stable; no evidence of erosion	Moderately stable:	Moderately unstable;	Unstable; many eroded
 Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. 	or bank failure: tittle apparent	infrequent, small areas of erosion mostly healed over.		onstate, many eroded areas; "raw" areas frequent along straight sections & bends; obvious bank sloughing; 60-100% of banks have erosion scars on sidestopes.
i, score;	5-10	6-8	3-5	0-2
	Left Side	Average:		
	Right Side	Comments:		
	Over 90% of the streambank surfaces	730,90% of the	50-70% of the	Less than 50% of the
Bank Vegetation Protection (score each bank) NOTE; reduce scores for annual crops & weeds which do not hold soil well (e.g. knapweed).	covered by stabilizing vegetation; vegetative disruption minimal or not evident; almost all plants allowed to grow naturally.	streambank surfaces covered by vegetation; disruption evident, but not affecting full plant growth potential to any great extent; more than	streambank surfaces covered in vegetation; disruption obvious; patches of bars soil or closely cropped vegetation common; less than one-half of potential plant height remaining.	streambank surfaces covered by vegetation; extensive disruption of vegetation removed to 2 inches or less.
, score:	3-10	64	3-5	0-2
	Left Side			
	CHI DIGE	Average:		
	Right Side (Comments:		
E. Vegetated Zone Width (score each side)	Width of vegetated zone > 100 feet.	Width of vegetated zone 30-100 feet.	Width of vegetated zone 10-30 feet.	Width of vegetated zone < 10 feet.
score: D	9-10	6-8	3-5	0-2
	Left Side	200		
		Average: Comments:		
	Right Side	-		
TOTAL SCORE:		Score compared to maximum possible:		

					Inp ID: Date:
Waterbody Name Station ID Mana	8 8	Ulu Tar Dear Doc	Location	County Lead 5 + Clark	HUC /0030/03
Lat/Long obtained by	y met	Long Long hod other than GPS? Y N N II	If Y what	Lat Verified? By GPS Datum (Circle Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	GPS Datum (Circle One): NAD 27 NAD 83 WGS84 what is the map scale?
Samples Taken:				Samula TD/001-T	11-
Water	Ø	Nutrients Metals Commons	uo	OS-POR CO	Sample Collection Procedure
Sediment				The Spirit of th	SED 1
Macroinvertebrate		Macroinvertebrate Habitat Asrat.			VICK HESS COMME
Algae/Macrophytes		Aquatic Plant Form			DEDIT COMMEN
Chlorophyll a				Darkey C. Halle J. Land	CENT-1 OTHER
Habitat Assessment		Stream Reach Asmt. Other	-	Company of the Compan	CHLPHL-2 OTHER:
Substrate		Pebble Count % Fines			Purpose:
Transect					
Photographs					
Field Notes					
Other					
Measurements:	Time:	938	facroins	Marring contabona Viol. December	State of the state
Q / Flow (cfs)		E tal	Sto Victo	Site Vicio	Kick Length (PL):
Temp: (C)	×	-	MIC VISI	Comments:	
pH:	00	Co	1		
SC: (mS/cm)		308 Sty . 313 15t.	SALIN	a ration as applica	
SC x 1000 ==		umbo/cm			
DO: (mg/L)	0	0.18 9.38			
TUR: Clear Slight	ght	Turbid Opaque	1		
Turbidity Comments:	16	9787G			
	1				

1	Waterbody:	le For			Station ID:	MINHEDBIL
1	Personnel:	(1000) E	19700NA			
I	"Distance from initial point	**Depth	"Velocity (1 point)	"Width	"Area	**Discharge
1	18' 250	0	0			
2	19.5	25	0,37			
3	21.0	.40	0,98			
4	22.5	.70	1-11			
5	24,0	170	1.05			
6	25.5	60	0,98			
7	27,0	,40	1,07			
8	2815	160	1,33			
9	30.0	.65	1.55			
10	31.5	170	1.26			
11	33.0	160	1.34			
12	34.5	160	1,30			
13	36.0	160	1.11			
14	37.5	.60	1,19			
15	39.0	,50	0,23			8
16	40.5	.45	0,57			14
17	42.6	145	0,24		-	
18	43,5	,35	8			
9	fil. OPEN	0	6			
20						
21						
22						
3						
4						
5			1			
6						
7		35				
8						
9						
0						

Revised 3/2003 DMA SUBSTRATE DEQ/MDM 6-19-03 Site Visit Code: 03-0718 Date: STORET Station ID: MIDMING BEOD Waterbody: Personnel: PEBBLE COUNT Liffle (Other) Count Count Characteristic Group: PEBL-CNT Particle Category Size (mm) Row ID Sum % of Total Cum. Total M:: 0 0.00% Silt / Clay <1 0.00% 1-2 0 Sand 0 0.00% 2-4 Very Fine 0.00% Fine 4-6 0 4 6 - 8 0 0.00% 5 Fine 8 - 12 0 0.00% 6 Medium GRAVELS M 12 - 16 0.00% 0 7 Medium 16 - 22 0 0.00% 8 Coarse MM Coarse 22 - 32 0 0.00% 9 32 - 45 10 Very Coarse 0 0.00% M. 45 - 64 11 Very Coarse 0 0.00% 对: 12 Small 64 - 90 0 0.00% 13 Small 90 - 128 0 0.00% 128 - 180 0 0.00% 14 Large 180 - 256 0 0.00% 15 Large 0 0.00% 16 Small 256 - 362 BOULDERS 362 - 512 0 0.00% 17 Small 0 512 - 1024 0.00% 18 Medium 1024 - 2048 0 19 Large 0.00% 0 Bedrock > 2048 0.00% 20 0 21 Total # Samples 0 0 0.00%

Pebble Count Data Entry Form

		Stream Re	each Assessm			
Station ID: MID	11/03/202	Date	6-19-03	Site Visit Code:		
Waterbody: [D.AA]	WALL BOOK	closer- D.S.	thou 434	Reach Length:	14 m. 6	
Waterbody Seg ID:			Personne	el:		
Station ID's on reach:			-10			
Question 1, Stream In	ncisement:					
8 = channel stable, no the incised channel. The model)	active downcut here is perennia	ting occurring; old Il riparian vegetati	downcutting appa on will established	rent but a new, stable in the riparian area.	riparian area h Stage 1 and 5,	as formed withi Schumm's
6 = channel has evider the falling bands, solid	nce of old down disturbance ev	cutting that has be ident. (Stage 4).	egun stabilizing, ve	getation is beginning	to establish, ev	en at the base
4 = small headcut, in e	arly stage, is pr	esent. Immediate	action may preve	nt further degradation	(early Stage 2)	
2 = unstable, channel in regetation that is prese	ent is mainly pio	neer species. Bar	nk failure is comm	on. (Stage 3)		
0 = channel deeply inci or rare flood events acc	cess the flood p	lain. Tributaries v	vill also exhibit dov	vncutting/headcuts.	Stage 2)	Only occasion
The presence of active	headcuts shou				sustainable.	
Actual Score:	8_	Potential Score	e:	-		
- Comments	_	- 1				
omments _						
Question 2, Percent of				12.0	9)(
Question 2, Percent of the lateral bank ero	sion is in balanc	e with the stream	and its setting	1.10		
Duestion 2, Percent of a the lateral bank ero	sion is in balance mount of active	e with the stream lateral bank erosi	and its setting ion occurring	.80	•):	
Question 2, Percent of a the lateral bank ero a there is a minimal a there is a moderate a there is excessive is	sion is in balance mount of active amount of active	e with the stream lateral bank erosi re lateral bank ero	and its setting ion occurring	.26	*10	
Question 2, Percent of the lateral bank ero: = there is a minimal a = there is a moderate	sion is in balance mount of active amount of active	e with the stream lateral bank erosi ve lateral bank ero ion occurring	and its setting ion occurring	Neg.		
Question 2, Percent of the lateral bank ero: = there is a minimal a = there is a moderate = there is excessive is	sion is in balance mount of active amount of active	e with the stream lateral bank erosi ve lateral bank ero ion occurring	and its setting ion occurring ision occurring		97	
Question 2, Percent of the lateral bank ero: = there is a minimal a = there is a moderate = there is excessive to a ctual Score:	sion is in balance mount of active amount of active ateral bank eros	e with the stream lateral bank erosi re lateral bank ero ion occurring Potential Score	and its setting ion occurring sion occurring	ing Supplied by the	Watershed:	
the lateral bank ero the there is a minimal a there is a moderate there is excessive to ctual Score: comments uestion 3, The Stream the stream exhibits a	sion is in balance mount of active amount of active ateral bank eros	e with the stream lateral bank erosive lateral bank ero ion occurring Potential Score	and its setting ion occurring sion occurring			ns as would be
the lateral bank ero there is a minimal a there is a moderate there is a consistent there is excessive to the lateral bank ero there is a moderate there is excessive to the lateral bank ero there is a moderate there is excessive to the lateral bank ero there is a moderate there is excessive to the lateral bank ero there is excessive to the lateral bank ero there is a moderate the stream exhibits a the stream exhibi	sion is in balance mount of active amount of active ateral bank eros m is in Balance no excess sedin	e with the stream lateral bank erosi ve lateral bank ero ion occurring Potential Score e with the Water a	and its setting ion occurring sion occurring :	occurs on point bars	and other location	ns as would be
the lateral bank ero there is a minimal a there is a moderate there is a moderate there is excessive la ctual Score: ctual Score: currents uestion 3, The Stream the stream exhibits a spected in a stable, dy sediment clogged gr mid-channel bars an	mount of active amount of active amount of active ateral bank erosem is in Balance no excess sedimanic system ravel's are appare common	e with the stream lateral bank erosi re lateral bank ero sion occurring Potential Score with the Water a nent/bedload depor	and its setting ion occurring ission occurring ission occurring ission occurring is and Sediment Be position, sediment occurring issued in the color, or other evidence is and sediment occurrence in the color, or other evidence is and sediment occurrence in the color, or other evidence is and sediment occurrence in the color, or other evidence is an accordance in the color, or other evidence is an accordance in the color, or other evidence is a color, o	occurs on point bars a	and other location	ns as would be
Question 2, Percent of the lateral bank ero: = there is a minimal at there is a moderate there is excessive because Score:	mount of active amount of active amount of active ateral bank erosem is in Balance no excess sedimanic system ravel's are appare common	e with the stream lateral bank erosi re lateral bank ero sion occurring Potential Score e with the Water a nent/bedload depo	and its setting ion occurring ission occurring ission occurring ission occurring is and Sediment Be position, sediment occurring ission, sediment occurring issued in the color, or other evidences systems), having a	ence of excess sedim at least 3 active chan	and other location	ins as would be
there is a minimal a there is a minimal a there is a moderate there is a moderate there is excessive a ctual Score: comments the stream exhibits a typected in a stable, dy sediment clogged gr mid-channel bars an	mount of active amount of active amount of active ateral bank erosem is in Balance no excess sedimanic system ravel's are appare common	e with the stream lateral bank erosi re lateral bank ero sion occurring Potential Score e with the Water a nent/bedload depo	and its setting ion occurring ission occurring ission occurring ission occurring is and Sediment Be position, sediment occurring issued in the color, or other evidence is and sediment occurrence in the color, or other evidence is and sediment occurrence in the color, or other evidence is and sediment occurrence in the color, or other evidence is an accordance in the color, or other evidence is an accordance in the color, or other evidence is a color, o	ence of excess sedim at least 3 active chan	and other location	ns as would be
auestion 2, Percent of a the lateral bank ero there is a minimal at there is a moderate there is excessive the autual Score: comments uestion 3, The Stream the stream exhibits a spected in a stable, dy the sediment clogged graph and channel bars are the stream is braided (e.	mount of active amount of active amount of active ateral bank erosem is in Balance no excess sedimanic system ravel's are appare common	e with the stream lateral bank erosi re lateral bank ero sion occurring Potential Score e with the Water a nent/bedload depo	and its setting ion occurring ission occurring ission occurring ission occurring is and Sediment Be position, sediment occurring ission, sediment occurring issued in the color, or other evidences systems), having a	ence of excess sedim at least 3 active chan	and other location	ns as would be

	icient Soil Present to Hold Water and Act as a Rooting Medium:
	% of the riparian area with sufficient soil to hold water and act as a rooting medium
	f the riparian area with sufficient soil to hold water and act as a rooting medium
	f the riparian area with sufficient soil to hold water and act as a rooting medium
0 = 35% or less of	the riparian area with sufficient soil to hold water and act as a rooting medium
Actual Score:	
Comments	
Question 5, Perc ratings for most r	ent of Streambank with Vegetation having a Deep, Binding Rootmass: (see Appendix I for stability
6 = more than 80%	6 of the streambank comprised of plant species with deep, binding root masses
	the streambank comprised of plant species with deep, binding root masses
	the streambank comprised of plant species with deep binding root masses
	of the streambank comprised of plant species with deep binding root masses
	5 AB Potential Score: 6
Actual Score:	Potential Score:
Comments	
1 = 1%-5% of the r	
Comments	
Johnneins	
Question 7, Distur	bance-Caused Undesirable Plants:
s = 1% or less of th	e riparian area has undesirable plants
	parian area has undesirable plants
= 5%-10% of the	riparian area has undesirable plants
	riparian area has undesirable plants
Actual Score:	Z Potential Score: 3
and world	
Comments	

Question 8, Wood potential for woody	dy Species Establishment and Regeneration: (Note: Skip this question if the riparian area has no species)
8 = all age classes	of native woody riparian species present (see table, Fig 2)
and shrubs, there n	of native woody riparian species clearly absent, all others well represented. For sites with potential for trees may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having and a young age class present indicate potential for recovery.
4 = two age classes or the stand is com	s of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented, prised of mainly mature, decadent or dead plants
dominate. Re-evalu	uced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species uate Question 1, incisement, if this has happened.
0 = some woody sp evaluated to ensure cedar	ecies present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt
Actual Score:	Potential Score: Your different
Comments	
Question 9, Utiliza species)	ation of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody
4 = 0-5% of the ava	Bable second year and older stems are browsed
	available second year and older stems are browsed
	available second year and older stems are browsed.
1 = more than 50% growth form, or they	of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" are high-lined or umbrella shaped.
0 = there is noticeat	ole use (10% or more) of unpalatable and normally unused woody species.
Actual Score:	Potential Score: 4
Actual Score.	
Comments	
	rian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank:
	the riparian/wetland plant cover has a stability rating ≥ 6
	riparian/wetland plant cover has a stability rating ≥ 6
	riparian/wetland plant cover has a stability rating ≥ 6
	riparian/wetland plant cover has a stability rating ≥ 6
) = less than 55% of	the riparian/wetland plant cover has a stability rating ≥ 6
Actual Score:	Potential Score: 8
	nords more attens instead of seasons
Comments	
	3 SRAF.xts

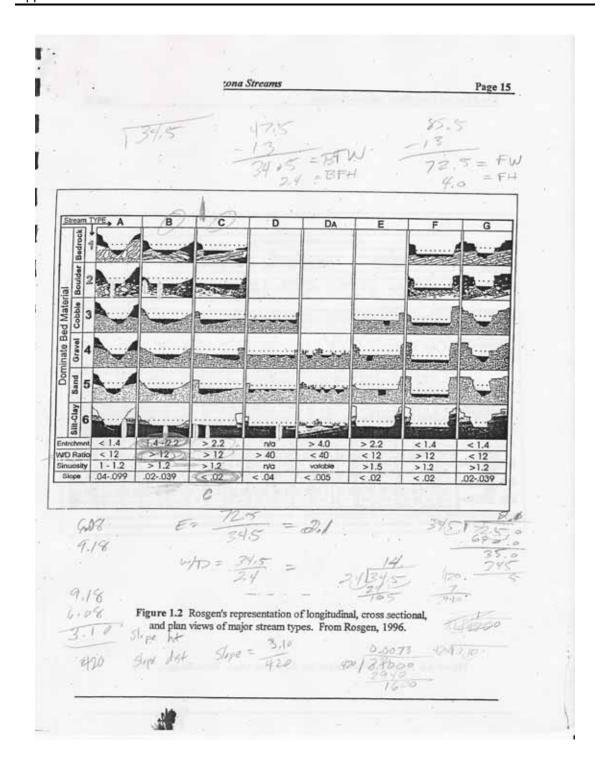
Question 11, Riparian Area/Floodplain Characteristics are Adequate to Dissipate Energy and Trap Sediment. 6 = active flood or overflow channels, large rock, or woody material present and adequate to dissipate energy and trap sediment. There is little surface erosion and no evidence of long, continuous erosional areas on floodplain/riparian area or streambank. There are no headcuts where either overland flow and/or flood channel flows return to the main channel. 4 = rock and/or woody material is present, but generally of insufficient size to dissipate energy. Some sediment trapping occurring. Occasional evidence of surface erosion. Generally not severe enough to have developed channels. 2 = inadequate rock and/or woody material available for dissipation of energy or sediment trapping. There is surface erosion (scouring) and occasional headcuts where overland flows or flood channel flows return to the main channel. 0 = riparian area/floodplain lacking any of these attributes: 1)adequate flood or overflow channels, 2) large rock, or 3) woody material suitable for energy dissipation and sediment trapping. Eroskonal areas are long and continuous. Lacking vegetation or substrate materials adequate to resist further erosion. Surface erosion is obvious on the floodplain/riparian area. Headcuts are present that have the potential to create meander cut-offs. Potential Score: Actual Score: Comments SUMMARY Potential Actual Score Possible Points Score 0 0 0, 2, 4, 6, 8 QUESTION 1: Stream Incisement 0, 2, 4, 6 QUESTION 2: Lateral Cutting 0, 2, 4, 6 0 0 QUESTION 3: Stream Balance N/A, 0, 1, 2, 3 N/A, 0, 2, 4, 6 QUESTION 4: Sufficient Soil 0 QUESTION 5: Rootmass 0 0 Weeds 0 0, 1, 2, 3 0 QUESTION 6: 0, 1, 2, 3 Undesirable Plants n 0 QUESTION 7: QUESTION 8: Woody Species Establishment 0 N/A, 0, 2, 4, 6, 8 0 QUESTION 9: Browse Utilization 0 N/A, 0, 1, 2, 3, 4 0 Riparian/Wetland Vegetative Cover * N/A, 0, 2, 4, 6, 8 0 OUESTION 10: Riparian Area/Floodplain Characteristics N/A, 0, 2, 4, 6 QUESTION 11: Total 0 0 61 0 Potential Score for most Bedrock or Boulder streams 0 (32) (questions 1, 2, 3, 6, 7, 11) 0 0 (49)Potential Score for most low energy "E" streams (questions 1 - 7, 10, 11) X 100 = % rating #DIV/0! Actual Score RATING: Potential Score 80-100% = SUSTAINABLE 50-80% = AT RISK LESS THAN 50% = NOT SUSTAINABLE Only in certain, specific situations can both of these receive an "N/A".

41	Montana Department of Environmental Quality Supplemental Questions	
The score for thes Note: Answers to	se questions does not have an effect on the rating above. these questions must consider the potential of the stream.	
	theries Habitat / Stream Complexity Note: the answers to question 12 will be averaged	
12a Adult and J	uvenile Holding/Escape Cover p pools, woody debris, overhanging vegetation, boulders, root wads, undercut banks and/or aquatic	0
	common (see above).	
4 = Fish habitat is	noticeably reduced. Most pools are shallow and/or woody debris, undercut banks, overhanging veges and/or aquatic vegetation are of limited supply.	etation
	itat features are sparse or non-existent or there are fish barriers.	
0 = There is not er	nough water to support a fishery	
N/A = Stream wou	old not support fish under natural conditions	
Actual Score:	3 Potential Score:	
Comments		
12b. Habitat Com	plexity venile and adult cover types is present. High flow juvenile and adult refugia are present.	
	or juvenile cover types are present. High flow refugia are reduced.	
0 = High flow refug		
	ld not support fish under natural conditions	
Actual Score:	Potential Score: 3	
Comments		
12c. Spawning Ha	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawning substrate are exc	ellent.
4 = Areal extent of	spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced.	
0 = Areal extent of	spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly red	uced.
N/A = Stream would	d not support fish under natural conditions.	
Actual Score:		
Comments		
- 7.5		-
	S SRAF x	

12d. Fish Passsa 8 = No potential fis	h passage barriers	apparent.			
	assage barriers pre				
N/A = Stream wou	d not support fish u	inder natural condit	ions.		
Actual Score:	_ %_	Potential Score	* X		
Comments					
12e. Entrainment 8 = Entrainment of	fish into water dive	rsions not an issue.			
4 = Entrainment of	fish into water diver	rsions may be a mo	derate issue.		
0 = Entrainment of	fish into water diver	rsions may be a ma	ojor issue,		
Actual Score:	_8_	Potential Score	8_		
Comments					
12a-e Avg. Score	Actual Score	0	Potential Score	0	
KAME AVIL DOUGH	Character Court				
State of the state					
Question 13. Sola	r Radiation				
Question 13. Sola 8 = More than 75%	r Radiation of the stream reach				
Question 13, Sola 3 = More than 75% 4 = 50-75% of the s	r Radiation of the stream reach tream reach does n	not have adequate	shading or the water tem	perature is probably elevate	d by irrigation,
Question 13, Sola 3 = More than 75% 4 = 50-75% of the s	r Radiation of the stream reach	not have adequate	shading or the water tem	perature is probably elevate	d by irrigation,
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2	r Radiation of the stream reach tream reach does n 5-50% of the stream	not have adequate m does not have a	shading or the water tem dequate shade.		
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2	r Radiation of the stream reach tream reach does notes of the stream of the stream reach	not have adequate m does not have a	shading or the water tem dequate shade.	perature is probably elevate on or the water temperature	
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75%	r Radiation of the stream reach tream reach does notes of the stream of the stream reach	not have adequate m does not have a	shading or the water tem dequate shade. equate shade by vegetati		
Question 13, Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75% trastically altered by	r Radiation of the stream reach tream reach does notes of the stream of the stream reach	not have adequate and does not have add	shading or the water tem dequate shade. equate shade by vegetati		
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75% trastically altered by actual Score:	r Radiation of the stream reach tream reach does notes of the stream of the stream reach	not have adequate and does not have add	shading or the water tem dequate shade. equate shade by vegetati		
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75% trastically altered by actual Score:	r Radiation of the stream reach tream reach does notes of the stream of the stream reach	not have adequate and does not have add	shading or the water tem dequate shade. equate shade by vegetati		
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75% trastically altered by actual Score:	r Radiation of the stream reach tream reach does notes of the stream of the stream reach	not have adequate and does not have ade a does not have ade Potential Score:	shading or the water tem dequate shade. equate shade by vegetati		
Question 13. Sola S = More than 75% S = 50-75% of the s S = Approximately 2 D = More than 75% Instically altered by Actual Score: Comments	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach y irrigation, etc.	not have adequate and does not have ade not have ade not have ade Potential Score:	shading or the water tem dequate shade. equate shade by vegetati		
Question 13, Sola 8 = More than 75% 8 = 50-75% of the s 8 = Approximately 2 9 = More than 75% trastically altered by actual Score: Comments Question 14, Algae = Algae not appare	r Radiation of the stream reach tream reach does notes of the stream reach ringation, etc.	not have adequate and does not have add Potential Score:	shading or the water tem dequate shade. equate shade by vegetati		
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75% Inastically altered by Actual Score: Comments Question 14. Algae = Algae not appare = in small patches	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach r irrigation, etc.	not have adequate and does not have ade Potential Score:	shading or the water tem dequate shade. equate shade by vegetati		
Question 13. Sola S = More than 75% S = 50-75% of the s S = Approximately 2 D = More than 75% Instically altered by Actual Score: Comments Question 14. Algae = Algae not appare = in small patches = in large patches	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rinigation, etc. growth / Nutrient ent. Rocks are slipp or along channel er or discontinuous m	not have adequate and does not have ade a does not have ade Potential Score:	shading or the water tem dequate shade. equate shade by vegetati	on or the water temperature	is probably
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75% Instically altered by Actual Score: Comments Question 14. Algae = Algae not appare = in small patches = in large patches = Mats cover botto	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rinigation, etc. growth / Nutrient ent. Rocks are slipp or along channel er or discontinuous m	not have adequate and does not have ade a does not have ade Potential Score:	shading or the water tem dequate shade. equate shade by vegetati		is probably
Question 13. Sola S = More than 75% S = 50-75% of the s S = Approximately 2 D = More than 75% Instically altered by Actual Score: Comments Question 14. Algae = Algae not appare = in small patches = in large patches	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rinigation, etc. growth / Nutrient ent. Rocks are slipp or along channel er or discontinuous m	not have adequate and does not have ade a does not have a does	shading or the water tem dequate shade. equate shade by vegetati	on or the water temperature	is probably
Duestion 13. Sola S = More than 75% S = 50-75% of the sit of the	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rinigation, etc. growth / Nutrient ent. Rocks are slipp or along channel er or discontinuous m	not have adequate and does not have ade a does not have a does	shading or the water tem dequate shade. equate shade by vegetati	on or the water temperature	is probably
Question 13. Sola 3 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 9 = More than 75% Instically altered by Actual Score: Comments Question 14. Algae = Algae not appare = in small patches = in large patches = Mats cover botto	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rinigation, etc. growth / Nutrient ent. Rocks are slipp or along channel er or discontinuous m	not have adequate and does not have ade a does not have a does	shading or the water tem dequate shade. equate shade by vegetati	on or the water temperature	is probably

6 = none			
4 = Slight			
2 = Moderate			
0 = Extensive			
N/A = No water			
	1	7	
Actual Score:	(D)	Potential Score:	
Comments			
**			
Question 16. Bacter			
4 = There are no know			
		ent. Wastewater or concentrated livestock op	perations are the most common sources.
0 = Feedlots are comr	non or raw sewa	ige is entering the stream	
Actual Score:	3_	Potential Score: 4	
Comments			
JOHINTOINS .			
t = The stream has a	healthy and dive	rse community of macroinvertebrates. Stream	n rifles usually have an abundance of may
= The stream has a lies, caddis flies and/o	healthy and dive or stone flies.	rse community of macroinvertebrates, Stream on tolerant taxa such as fly and midge larva.	riffles usually have an abundance of may
= The stream has a lies, caddis flies and/o ! = The stream is dom	healthy and dive or stone flies. inated by polluti	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
4 = The stream has a lies, caddis flies and/o 2 = The stream is dom 0 = Macroinvertebrates	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
lies, caddis flies and/o	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
= The stream has a lies, caddis flies and/o = The stream is dom = Macroinvertebrates I/A = Stream reach is	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
I = The stream has a lies, caddis flies and/o I = The stream is dom I = Macroinvertebrates I/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
4 = The stream has a lies, caddis flies and/o 2 = The stream is dom 0 = Macroinvertebrates N/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
4 = The stream has a lies, caddis flies and/o 2 = The stream is dom 0 = Macroinvertebrates	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
4 = The stream has a lies, caddis flies and/o 2 = The stream is dom 0 = Macroinvertebrates N/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
I = The stream has a lies, caddis flies and/o I = The stream is dom I = Macroinvertebrates I/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
= The stream has a lies, caddis flies and/o = The stream is dom = Macroinvertebrates I/A = Stream reach is ctual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
I = The stream has a lies, caddis flies and/o I = The stream is dom I = Macroinvertebrates I/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of may
I = The stream has a lies, caddis flies and/o I = The stream is dom I = Macroinvertebrates I/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	
I = The stream has a lies, caddis flies and/o I = The stream is dom I = Macroinvertebrates I/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	
I = The stream has a lies, caddis flies and/o I = The stream is dom I = Macroinvertebrates I/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	
4 = The stream has a lies, caddis flies and/o 2 = The stream is dom 0 = Macroinvertebrates N/A = Stream reach is actual Score:	healthy and dive or stone flies. inated by polluti s are rare or abs	on tolerant taxa such as fly and midge larva.	

Question 18. Irrig Evaluate effects fro	ation impacts (/ om de-watering or	Assess during critical li inter-basin transfer of	ow flow periods or water.)	you may need to inquire loca	ally about this.
8 = There are no no	oticeable impacts	from irrigation			
6 = Changes in flov organisms.	v resulting from in	rigation practices are r	noticeable, however	r flows are adequate to supp	ort aquatic
4 = Flows support a	quatic organisms	, but habitat, especial	ly riffles are drastic	ally reduced or impacted.	
2 = The flow is low	enough to severe	ly impair aquatic organ	nisms		
0 = All of the water	has been diverted	from the stream			
N/A = Stream reach	is ephemeral.				
	4	Potential Score:	8		
Actual Score:	- tr Jole	ner h	mallels	Ano in	
Comments	120,750	009	,		
timber harvesting, u 4 = Impacts from lar obvious signs of hur 2 = Landuse impact overwhelming evide	rban, roads, etc. induse activities ar man induced eros is are significant a nice that the strea- ts are so intrusive	e obvious and occur to ion, saline seeps or over nd widespread. Visua m is impaired.	hroughout most of vergrazing within th al observation and p	ryland agriculture, irrigation, the stream reach. For exame watershed. photo documentation would ral features. The stream do	nple, there are
Actual Score:	6	Potential Score:	8		
TOTAL STORY	berry	~/			
Comments		0			
otal Actual	0	Total Potential	0		
RATING	Total x	100 _	#DIV/0!		
	Potential				
VERALL RATING	<u>C</u>	Total NRCS Actual + 1 Total NRCS Potential	Total MT Suppleme + Total MT Supple	ent Actual) x100 ment Potential)	#DIV/0!
	75-100% = SUS				
	50-75% = AT R	ISK % = NOT SUSTAINAE	BLE		
	LLUG III III UU		NA.		
			W		SRAF vis



			Personnel: Cardiaco Il Sensino	Personnel: Candlew 13 southan
9	PS C	PARAMETER POST BOYN	County Man Con E	нис /0130/6.2
Lat/Long obtained by	meth	Lat Verified? By GPS Datum (Crebe CavLong obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	Verified? ☐ By ☐ GPS Datum (C	GPS Datum (Circle One); NAD 27 NAD 83 WGS84 what is the map scale?
Samples Taken:			Sample ID/Esta I acceptant	
Water	29	Nutrients Metals Commons	D.A. Marie	Sample Collection Procedure
Sediment			Name of the last o	GRAB
Macroinvertebrate		Macroinvertebrate Habitat Acout	CONTROL STORY	. SED-1
Algae/Macrophytes		Acustic Plant Econ		KICK HESS OTHER:
Chlomobull	D	THE THE PARTY OF T		PERI-1 OTHER:
погорији а][OSHOTAL CELLICE ALTON	CHLPHL-2 OTHER
Habitut Assessment		Stream Reach Asmt. Other		D
Substrate		Pebble Count % Fines		rurpose:
Transect				
Photographs				
Field Notes				
Other				
Measurements:	Time:	02:5	Macroinvertebrate Kiel-Durasione	1 00 11 0 10 00
Q / Flow (cfs)		Eu Site Visit	Site Visit Comments	Nick Length (Ft.):
Temp: (C)	W/O	29 A	Comments:	
pH:	1	Oh?	SOUTH COUNTY OF THE PARTY OF TH	
SC: (mS/cm)	10	DOD E-Cs / IQ4		
SC x 1000 =		umbokum		
DO: (mg/L)	10	AS MILL 91, 09th		
TUR: Clear Slight		Turbid Opaque		
Turbidity Comments:		2.3k We		
		1.5% NTO		
			2000	

	Date: 19 0 Waterbody: 10 d		DECLUSIA	war lose	3-0721 5 1455 Station ID	thia MFD880
	Personnel: Laud	1000 / Box	Man	0		
	"Distance from initial point	**Depth	"Velocity (at point)	++Width	**Area	"Discharge
1	14 (50)	130	170			
2	17	135	175			
3	18	.35	178			
4	321	,35	1.13			
5	V20	138	1,33			
6	- 22	135	,90			
7	23	135	.89			
8	23.4 REN	0	1			
9						
10						
11						
12						
13						
14		1 1 1		-took CI	34 A	
15		lights	nas show	TOUC 41	NOS quickl	
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M12MFDBR01	Date-	7/23/20	003 11:
liddle Fork Dearborn, Upstream near Roger's	Pass		
Geomorphology			
parameter	value	units	
Bankfull Width		Ft Ft	
Mean Depth Bnkfull X-sect area		Sq Ft	
Width/Depth		0971	
Max Depth		Ft	
Flood prone width		Ft	
Intrenchement Ratio			
Vater slope Channel Sinuosity	0.0259		
BEHI Index Score (adjusted)			
BEHI Rating	+	ļ	
Channel D50	27	mm	
Percentage of Fines (<2mm)		%	
Stream Type			
Discharge	0.56	cfs	
Stream Reach Habitat As	seasemante	•	
Parameter Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	Value	%	
Stream Reach Assessment Score (MT adjusted)		%	
Macroinvertabrate Habitat Assessment Score	96.5		
OVERALL SITE RAT	INGS		
), B 4 (NB00)			
stream Reach Assessment Score (NRCS)			
Stream Reach Assessment Score (NRCS)			
Stream Reach Assessment Score (NRCS) Stream Reach Assessment Score (MT adjusted)			
· ,			
· ,			2 min
Stream Reach Assessment Score (MT adjusted)			2 min 25'
Stream Reach Assessment Score (MT adjusted)			
Stream Reach Assessment Score (MT adjusted)	ter chemis:	try	
Stream Reach Assessment Score (MT adjusted) Acroinvertabrate Habitat Assessment Score	ter chemis	try units	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wa	value 0.56	units cfs	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of ware parameter Flow Emperature, water	<i>value</i> 0.56 9.86	units cfs degree C	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wa parameter Flow Emperature, water H	9.86 8.38	units cfs degree C	
Stream Reach Assessment Score (MT adjusted) Acroinvertabrate Habitat Assessment Score Field Measurements of ware parameter Flow Temperature, water H Specific Conductance	value 0.56 9.86 8.38 0.241	units cfs degree C mS/cm	
Field Measurements of wangerature, water Herselfic Conductance Dissolved Oxygen	value 0.56 9.86 8.38 0.241 10.81	units cfs degree C mS/cm mg/L	
Field Measurements of wangerature, water of the periodic Conductance bissolved Oxygen Dissolved Oxygen, % Saturation	value 0.56 9.86 8.38 0.241 10.81 95.5	units cfs degree C mS/cm mg/L %	
Field Measurements of wangerature, water Herselfic Conductance Dissolved Oxygen	value 0.56 9.86 8.38 0.241 10.81 95.5	units cfs degree C mS/cm mg/L	
Field Measurements of wangerature, water of the periodic Conductance bissolved Oxygen Dissolved Oxygen, % Saturation	value 0.56 9.86 8.38 0.241 10.81 95.5	units cfs degree C mS/cm mg/L %	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wa parameter Flow Temperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen Urbidity Lab Results from Field	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L %	25'
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wa parameter Flow Temperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen Urbidity Lab Results from Field parameter	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU	25'
Field Measurements of war parameter Field Measurements of war parameter Flow Emperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen Urbidity Lab Results from Field parameter Fotal Suspended Solids, TSS	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU units mg/L	25'
Field Measurements of war parameter Ground Conductance Dissolved Oxygen, % Saturation Urbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	25' RL 10 10 10
Field Measurements of wan parameter Joseph Green Water Management Score Field Measurements of wan parameter Jow Emperature, water Member Me	value	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	25' RL 10 10 10
Field Measurements of war parameter Ground Conductance Dissolved Oxygen, % Saturation Urbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/M mg/M	25' RL 10 10 10
Field Measurements of wa parameter Flow Temperature, water H Dissolved Oxygen	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M^3 mg/m^3	25' RL 10 10 10 0.1
Field Measurements of wa parameter Flow Temperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen Society of the Specific Conductance Dissolved Oxygen Diss	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M^3 mg/m^3	25' RL 10 10 10 0.1 0.1 0.1
Field Measurements of wa parameter Flow Temperature, water Hespecific Conductance Dissolved Oxygen Dissol	value 0.56 9.86 9.86 8.38 0.241 10.81 95.5 0.46	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/m^3 mg/L	25' RL 10 10 0.1 0.1 0.10 0.10
Field Measurements of war parameter Grenperature, water Hebitat Described Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, TSS Volatile Suspended Solids, VSS SS-VSS Vater Column Chlorophyll a Solids Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 0.56 9.86 9.86 8.38 0.241 10.81 95.5 0.46	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.10 0.10 0.10 0.10 0
Field Measurements of war parameter Grenperature, water Hebitat Description of the parameter Joseph Grenperature of the parameter of the parameter Joseph Grenperature of the parameter o	value 0.56 9.86 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.10 0.10 0.10 0.10 0
Field Measurements of war parameter Grenperature, water Hebitat Description of the parameter Joseph Grenperature of the parameter of the parameter Joseph Grenperature of the parameter o	value 0.56 9.86 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.10 0.10 0.10 0.10 0
Field Measurements of war parameter Grenperature, water Hebitat Description of the parameter Joseph Grenperature of the parameter of the parameter Joseph Grenperature of the parameter o	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.10 0.10 0.10 0.10 0
Field Measurements of ware parameter Field Measurements of ware parameter Flow Emperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen Order Description For a Results from Field parameter For a Suspended Solids, TSS Foliatile Suspended Solids, VSS FSS-VSS Vater Column Chlorophyll a Benthic Chlorophyll a For a Florid Field parameter For a Results from Field parameter	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.10 0.10 0.10 0.10 0
Field Measurements of wan parameter Flow Emperature, water H Bissolved Oxygen Dissolved Oxygen, % Saturation Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS SS-VSS Vater Column Chlorophyll a sentinic Chlorophyll a cotal Phosphorus, TP Total Kiejadhl Notrogen, TKN Itirate + Nitrite Total Nitrogen, TN Macroinvertabrate Dat parameter Macroinvertabrate Dat parameter TOTAL SCORE (max =18)	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.10 0.10 0.10 0.10 0
Field Measurements of ware parameter Field Measurements of ware parameter Flow Emperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen Order Description For a Results from Field parameter For a Suspended Solids, TSS Foliatile Suspended Solids, VSS FSS-VSS Vater Column Chlorophyll a Benthic Chlorophyll a For a Florid Field parameter For a Results from Field parameter	value 0.56 9.86 8.38 0.241 10.81 95.5 0.46	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.10 0.10 0.10 0.10 0

M12MFDBR04	Date-	7/23/2003	13:
liddle Fork Dearborn, Below Ingersoll's Rd.			
Compunicacy Do			,
Geomorphology Da	la Tvalue	unito	
parameter Bankfull Width	27.00	units Ft	
Mean Depth	0.65	-	1
Bnkfull X-sect area	17.60		1 1
Width/Depth	41.42		1
Max Depth	1.69		
Flood prone width	123.70	Ft	
Entrenchement Ratio Water slope	4.58 0.0068		
Channel Sinuosity	0.0000		1 1
BEHI Index Score (adjusted)			1 1
BEHI Rating			
Channel D50	27	mm	
Percentage of Fines (<2mm)	0.4	%	
Stream Type Discharge	C4 5.98	cfs	
	0.50	5.5	,
			_
Stream Reach Habitat Asse	ssments		1
Parameter	Value	Units]
Stream Reach Assessment Score (NRCS)	100]
Stream Reach Assessment Score (MT adjusted)	99.3		
Macroinvertabrate Habitat Assessment Score OVERALL SITE RATING	86.9	%	
OVERALL SITE RATING	_	aired, Fully	
Stream Reach Assessment Score (NRCS)		orting	
O. D. I.A		<u> </u>	1 1
Stream Reach Assessment Score (MT adjusted)]
Macroinvertabrate Habitat Assessment Score			2.75 min
Wacronivertabrate Habitat Assessment Score			40'
Field Measurements of water	- chemietm	-	, l
parameter	value	units	.
Flow	5.98		-
		degree C	1
Temperature, water		degree C	
Temperature, water pH Specific Conductance	18.59 8.19 0.297	mS/cm	
Temperature, water pH Specific Conductance Dissolved Oxygen	18.59 8.19 0.297 9.64	mS/cm mg/L	
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	18.59 8.19 0.297 9.64 102.9	mS/cm mg/L %	
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	18.59 8.19 0.297 9.64 102.9	mS/cm mg/L	
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	18.59 8.19 0.297 9.64 102.9	mS/cm mg/L %	
Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	18.59 8.19 0.297 9.64 102.9	mS/cm mg/L %	
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa	18.59 8.19 0.297 9.64 102.9 1	mS/cm mg/L % NTU	RL
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa parameter Total Suspended Solids, TSS	18.59 8.19 0.297 9.64 102.9 1	mS/cm mg/L % NTU units	10
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND	mS/cm mg/L % NTU units mg/L mg/L	10 10
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND	mS/cm mg/L % NTU units mg/L mg/L	10 10 10
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND ND 2.1	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/m^3	10 10
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Si parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND ND 2.1	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/l mg/m^3 mg/m^3	10 10 10 0.1
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND 2.1 34.9	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/l mg/m^3 mg/m^3	10 10 10 0.1 0.1
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND 1 34.9 0.031	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m/3 mg/m^3 mg/L mg/L	10 10 10 0.1 0.1 0.004
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND ND 1 34.9 0.031	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/m/3 mg/m^3 mg/m^3	10 10 10 0.1 0.1 0.004 0.5
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND ND 1 34.9 0.031	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/mg/m^3 mg/m^3 mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	18.59 8.19 0.297 9.64 102.9 1 amples value ND	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/mg/m^3 mg/m^3 mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	18.59 8.19 0.297 9.64 102.9 1 amples value ND Results	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/l mg/m^3 mg/m^3 mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data F parameter	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND ND ND ND ND ND ND Results value	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data F	18.59 8.19 0.297 9.64 102.9 1 amples value ND ND ND ND ND ND ND ND ND Results value	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Scaparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data F parameter TOTAL SCORE (max = 18)	18.59 8.19 0.297 9.64 102.9 1 amples value ND	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Temperature, water or DH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data F parameter TOTAL SCORE (max = 18) PERCENT OF MAX SCORE	18.59 8.19 0.297 9.64 102.9 1 amples value ND	mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5

M12MFDBR02	Date-	7/23/20	03 14:′
Middle Fork Dearborn, Downstream of Hwy 434	1		
			_
Geomorphology D			
parameter	value	units	_
Bankfull Width	34.50		_
Mean Depth	2.20		_
Bnkfull X-sect area Nidth/Depth	15.68	Sq Ft	_
Max Depth	2.40		
Flood prone width	72.50	-	
Entrenchement Ratio	2.10		
Water slope	0.0074		
Channel Sinuosity			
BEHI Index Score (adjusted)			
BEHI Rating			
Channel D50	27	mm	
Percentage of Fines (<2mm)	D.1	%	
Stream Type	5.94	almost a C	
Discharge	0.94	0/0	
Stream Reach Habitat As	sessmente		
Parameter Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	85		-
Stream Reach Assessment Score (MT adjusted)	86.8		
Macroinvertabrate Habitat Assessment Score	82.7		
OVERALL SITE RATI	NGS		
D. D. L.A. (AIDOO)	Non In	paired, Fully	7
Stream Reach Assessment Score (NRCS)			
	Support	ing, threatened	
. ,	Support	ing, threatened	-l -l
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score	Support	ing, threatened	1.75 min 25'
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score			
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat	er chemis	try	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter	er chemis	try units	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow	er chemis	try units cfs	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow Temperature, water	er chemis value 5.94 20.5	units cfs degree C	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow	rer chemis: value 5.94 20.5 8.27	units cfs degree C	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow Temperature, water	rer chemis:	units cfs degree C	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow Temperature, water OH Specific Conductance	rer chemis value 5.94 20.5 8.27 0.311 9.23 102.8	units cfs degree C mS/cm mg/L %	
Field Measurements of water parameter Femperature, water oh H Specific Conductance Dissolved Oxygen	rer chemis value 5.94 20.5 8.27 0.311 9.23 102.8	units cfs degree C mS/cm mg/L	
Field Measurements of wat parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	rer chemis value 5.94 20.5 8.27 0.311 9.23 102.8	units cfs degree C mS/cm mg/L %	
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity	rer chemis value 5.94 20.5 8.27 0.311 9.23 102.8 1.24	units cfs degree C mS/cm mg/L %	
Field Measurements of wat parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field	rer chemis value 5.94 20.5 8.27 0.311 9.23 102.8 1.24	units cfs degree C mS/cm mg/L % NTU	25'
Field Measurements of wat parameter Flow Femperature, water OH Oissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter	rer chemis:	units cfs degree C mS/cm mg/L % NTU	25'
Field Measurements of wat parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS	rer chemis:	mS/cm mg/L % NTU	25' RL 10
Field Measurements of wat parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Joint Measurements of water OH Joint Measurements of wate	value 5.94 20.5 8.27 0.311 9.23 102.8 1.24	mS/cm mg/L % NTU units units mg/L mg/L mg/L	25' RL 10 10
Field Measurements of wat parameter Flow Femperature, water ohr Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS	value 5.94 20.5 8.27 0.311 9.23 102.8 1.24	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L	25' RL 10 10 10
Field Measurements of wat parameter Flow Femperature, water OH Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Flotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a	value 5.94 20.5 8.27 0.311 9.23 102.8 1.24 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1
Field Measurements of wat parameter Flow Femperature, water Objectific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Flotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	Samples value	wry units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m3 ng/m^3 mg/m^3	25' RL 10 10 0.1 0.1 0.1
Field Measurements of wat parameter Flow Femperature, water OH Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP	Samples Value	wnits wnits degree C mS/cm mg/L % NTU wnits mg/L mg/L mg/L mg/L mg/M^3 mg/M^3 mg/L	25' RL 10 10 10 0.1 0.1 0.004
Field Measurements of wat parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Flotal Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Nater Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN	Samples value	ms/cm mg/L % NTU units units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	25' RL 10 10 0.1 0.1 0.1
Field Measurements of water parameter Flow Femperature, water OH Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Flotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Nater Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN Nitrate + Nitrite	Samples value 5.94 20.5 8.27 0.311 9.23 102.8 1.24 Samples value ND ND ND ND ND ND ND ND ND N	ms/cm mg/L wnits mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.01 0.004 0.5
Field Measurements of wat parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Flotal Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Nater Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN	Samples value 5.94 20.5 8.27 0.311 9.23 102.8 1.24 Samples value ND ND ND ND ND ND ND ND ND N	ms/cm mg/L % NTU units units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	25' RL 10 10 0.1 0.01 0.01 0.004 0.5
Field Measurements of wat parameter Field Measurements of wat parameter Flow Temperature, water ohl Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN Nitrate + Nitrite Fotal Nitrogen, TN	value 5.94 20.5 8.27 0.311 9.23 102.8 1.24	ms/cm mg/L wnits mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 0.1 0.01 0.01 0.004 0.5
Field Measurements of wat parameter Field Measurements of wat parameter Flow Temperature, water ohl Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN Nitrate + Nitrite Fotal Nitrogen, TN	value 5.94 20.5 8.27 0.311 9.23 102.8 1.24	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.01 0.004 0.5
Field Measurements of wat parameter Field Measurements of wat parameter Flow Femperature, water ohl Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Nater Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN Nitrate + Nitrite Fotal Nitrogen, TN Macroinvertabrate Data parameter	value 5.94 20.5 8.27 0.311 9.23 102.8 1.24	wnits cfs degree C mS/cm mg/L % NTU wnits mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	25' RL 10 10 10 0.1 0.1 0.01 0.004 0.5
Field Measurements of water parameter Flow Femous Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN Nitrate + Nitrite Fotal Nitrogen, TN Macroinvertabrate Data parameter FOTAL SCORE (max = 18)	Samples Value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	25' RL 10 10 10 0.1 0.1 0.01 0.004 0.5
Field Measurements of wat parameter Field Measurements of wat parameter Flow Femperature, water ohl Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Nater Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN Nitrate + Nitrite Fotal Nitrogen, TN Macroinvertabrate Data parameter	Samples Value ND ND ND ND ND ND ND N	wnits wnits cfs degree C mS/cm mg/L % NTU wnits mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	25' RL 10 10 10 0.1 0.1 0.01 0.004 0.5

	BEHI Field Measures			BEHI Calc	ulated Valu	es
	Parameter	Value	Units	Parameter	Value	Units
_				Slope	0.0074	
Longitudinal Information	Rod reading @ Upstream Edge of Wa	ter 6.08	feet	Sinuousity		
ud	Rod reading @ Downstream Edge of			Max Depth	2.40	feet
ig E	Water	9.18	feet	Floodprone Height	4.80	feet
현별	Stream Distance	420.00	feet	Mean Depth	2.20	feet
_	Straightline Distance		feet	Bankfull Width	34.50	feet
=	Left Edge of Bankfull	0.00	feet	Floodplrone Width	72.50	feet
e _	Right Edge of Bankfull	34.50	feet	Bankfull Area		ft^2
Cross-Sectional Information	Rod reading @ Thalweg	4.80	feet	FloodproneArea		ft^2
Se	Rod reading @ Bankfull Depth	2.40	feet	W/D Ratio	15.68	
for S	Rod reading @ Floodplain Depth	0.00	feet	Cross Sectional Area	0.00	ft^2
<u>ة ج</u>	Left Edge of Floodprone depth	0.00	feet	Entrenchment Ratio	2.10	
ပ	Right Edge of Floodprone depth	72.50	feet			
Ę	Bank Height		feet			
atic .	Bankfull Height	2.40	feet	Bank Ht/Bankfull Ht	0.00	
Ĕ	Root Depth		feet	Root Depth/Bank Ht		
BEHI Information	Root Density		%	Root Density		%
드	Bank Angle		Degrees	Bank Angle		degrees
표	Surface Protection		%	Surface Protection		%
Ø						
SS	Velocity at thalweg		ft/sec	Velocity Gradient		ft/sec/ft
Stress tion	Tape reading at thalweg		feet	Near Bank stress /		
atic	velocity at left bank		ft/sec	Mean Shear stress		
ar Bank Stre Information	tape reading at left bank		feet	A nb / A		
ğ.	Near bank stress					
Near Inf	Mean shear stress					
Ž	Near bank x-sectional area		ft^2			
	M12MFDBR02 Date-	7/23/2003	14	l:15		

M12MFDBR02 Date- 7
Middle Fork Dearborn, Downstream of Hwy 434

M12MFDBR01	Date-	6/19/2003	15:20	
Middle Fork Dearborn, Upstream near Roger's Pass				

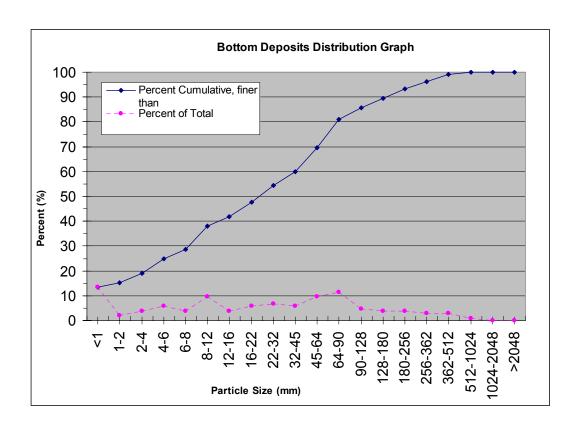
Geomorphology Data			
parameter	value	units	
Bankfull Width		Ft	
Mean Depth		Ft	
Bnkfull X-sect area		Sq Ft	
Width/Depth			
Max Depth		Ft	
Flood prone width		Ft	
Entrenchement Ratio			
Water slope	0.0259		
Channel Sinuosity			
BEHI Index Score (adjusted)			
BEHI Rating			
Channel D50		mm	
Percentage of Fines (<2mm)	15.24	%	
Stream Type			
Discharge	2.40	cfs	

Stream Reach Habitat Assessments					
Parameter	Value	Units			
Stream Reach Assessment Score (NRCS)		%			
Stream Reach Assessment Score (MT adjusted)		%			
Macroinvertabrate Habitat Assessment Score		%			
OVERALL SITE RATING	OVERALL SITE RATINGS				
Stream Reach Assessment Score (NRCS)					
Stream Reach Assessment Score (MT adjusted)					
Macroinvertabrate Habitat Assessment Score					

Field Measurements of water chemistry				
parameter value units				
Flow	2.40	cfs		
Temperature, water	10.29	degree C		
рН	8.4			
Specific Conductance	0.2	mS/cm		
Dissolved Oxygen	10.25	mg/L		
Dissolved Oxygen, % Saturation	91	%		
Turbidity	1.97	NTU		

Lab Results from Field Samples			
parameter	value	units	RL
Total Suspended Solids, TSS	ND	mg/L	10
Volatile Suspended Solids, VSS	ND	mg/L	10
TSS-VSS	ND	mg/L	10
Water Column Chlorophyll a	0.6	mg/m^3	0.1
Benthic Chlorophyll a	9.2	mg/m^3	0.1
Total Phosphorus, TP	0.005	mg/L	0.004
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5
Nitrate + Nitrite	0.04	mg/L	0.01
Total Nitrogen, TN		mg/L	

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	14	13.33	13.33
S	1.5	1-2	2	1.90	15.24
FG	3	2-4	4	3.81	19.05
FG	5	4-6	6	5.71	24.76
FG	7	6-8	4	3.81	28.57
MG	10	8-12	10	9.52	38.10
MG	14	12-16	4	3.81	41.90
CG	18	16-22	6	5.71	47.62
CG		22-32	7	6.67	54.29
CG	38.5	32-45	6	5.71	60.00
CG	54.5	45-64	10	9.52	69.52
SC	77	64-90	12	11.43	80.95
SC	109	90-128	5	4.76	85.71
MC	154	128-180	4	3.81	89.52
LC		180-256	4	3.81	93.33
LC	309	256-362	3	2.86	96.19
SB		362-512	3	2.86	99.05
MB	768	512-1024	1	0.95	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	105	100.00	100.00
		D50 particle size (mm)	22-32		
		% Fines (<2mm)	15.24		
	M12MFDBR01	Date-	6/19/2003		15:20
	Middle Fork Dearborn, Ups	stream near Roger's Pa	ss		



M12MFDBR04	Date-	6/19/2003	12:30
Middle Fork Dearborn, Below Ingersoll's Rd.			

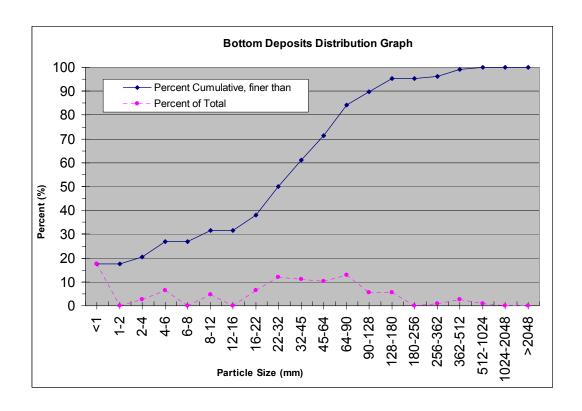
Geomorphology Data			
parameter	value	units	
Bankfull Width	27.00	Ft	
Mean Depth	0.65	Ft	
Bnkfull X-sect area	17.60	Sq Ft	
Width/Depth	41.42		
Max Depth	1.69	Ft	
Flood prone width	123.70	Ft	
Entrenchement Ratio	4.58		
Water slope	0.0068		
Channel Sinuosity			
BEHI Index Score (adjusted)			
BEHI Rating			
Channel D50	27	mm	
Percentage of Fines (<2mm)	17.59	%	
Stream Type			
Discharge	13.58	cfs	

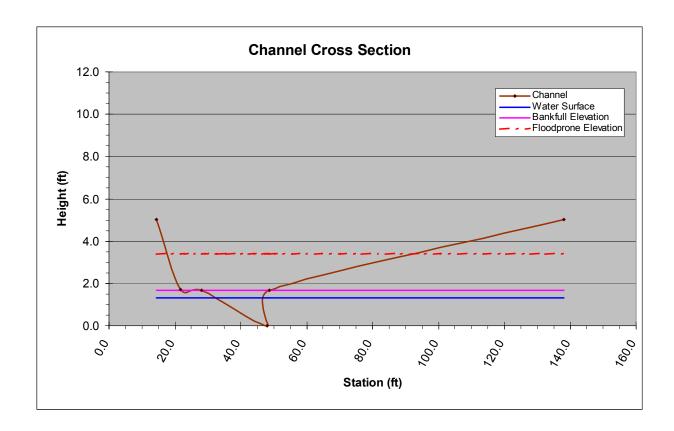
Stream Reach Habitat Assessments			
Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	100	%	
Stream Reach Assessment Score (MT adjusted)	99.3 %		
Macroinvertabrate Habitat Assessment Score		%	
OVERALL SITE RATING	S		
Stream Reach Assessment Score (NRCS)	Non Impaired, Fully Supporting		
Stream Reach Assessment Score (MT adjusted)			

Field Measurements of water chemistry							
parameter value units							
Flow	13.58	cfs					
Temperature, water	15.69	degree C					
рН	8.11						
Specific Conductance	0.246	mS/cm					
Dissolved Oxygen	8.88	mg/L					
Dissolved Oxygen, % Saturation	89.5	%					
Turbidity	2.85	NTU					

Lab Results from Field Samples						
parameter value units						
Total Suspended Solids, TSS	ND	mg/L	10			
Volatile Suspended Solids, VSS	ND	mg/L	10			
TSS-VSS	ND	mg/L	10			
Water Column Chlorophyll a	0.6	mg/m^3	0.1			
Benthic Chlorophyll a	16.8	mg/m^3	0.1			
Total Phosphorus, TP	ND	mg/L	0.004			
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5			
Nitrate + Nitrite	ND	mg/L	0.01			
Total Nitrogen, TN		mg/L				

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	19	17.59	17.59
S	1.5	1-2		0.00	17.59
FG	3	2-4	3	2.78	20.37
FG	5	4-6	7	6.48	26.85
FG		6-8		0.00	26.85
MG		8-12	5	4.63	31.48
MG		12-16		0.00	31.48
CG		16-22	7	6.48	
CG		22-32	13	12.04	50.00
CG		32-45	12		61.11
CG	54.5	45-64	11	10.19	71.30
SC		64-90	14		84.26
SC		90-128	6		89.81
MC		128-180	6		95.37
LC		180-256		0.00	95.37
LC		256-362	1	0.93	
SB		362-512	3	2.78	99.07
MB	768	512-1024	1	0.93	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	108	100.00	100.00
		D50 particle size (mm)	22-32		
		% Fines (<2mm)	17.59		
	M12MFDBR04	Date-	6/19/2003		12:30
	Middle Fork Dearborn,	Below Ingersoll's Rd.			





	BEI	HI Field Me	asures		BEHI Calcu	ılated Valu	ies
	Parameter		Value	Units	Parameter	Value	Units
_	Rod reading @ Upst	ream Edge			Slope	0.0068	
ina ion	of Water		4.60	feet	Sinuousity		
ongitudinal Information	Rod reading @ Dow	nstream			Max Depth	1.69	feet
	Edge of Water		6.40	feet	Floodprone Height	3.38	feet
	Stream Distance		263.50	feet	Mean Depth	0.65	feet
	Straightline Distance			feet	Bankfull Width	27.00	feet
_	Left Edge of Bankful	l	21.70	feet	Floodplrone Width	123.70	feet
ng 🖆	Right Edge of Bankfo	ull	48.70	feet	Bankfull Area	17.60	ft^2
it ë	Rod reading @ Thalweg		8.35	feet	FloodproneArea		ft^2
Cross-Sectional Information	Rod reading @ Bankfull Depth		6.66	feet	W/D Ratio	41.42	
	Rod reading @ Floodplain Depth		4.97	feet	Cross Sectional Area	17.60	ft^2
	Left Edge of Floodprone depth		14.30	feet	Entrenchment Ratio	4.58	
O	Right Edge of Floodprone depth		138.00	feet			
nc	Bank Height			feet			
BEHI Information	Bankfull Height			feet	Bank Ht/Bankfull Ht		
Ĕ	Root Depth			feet	Root Depth/Bank Ht		
وَ	Root Density			%	Root Density		%
들	Bank Angle			Degrees	Bank Angle		degrees
盂	Surface Protection			%	Surface Protection		%
Stress	Velocity at thalweg			ft/sec	Velocity Gradient		ft/sec/ft
tre	Tape reading at that	weg		feet	Near Bank stress /		
c Si atic	velocity at left bank			ft/sec	Mean Shear stress		
ar Bank Stre Information	tape reading at left b	ank		feet	A nb / A		
g g	Near bank stress						
Near	Mean shear stress						
Z	Near bank x-sections	al area		ft^2			

M12MFDBR02	Date-	6/19/2003	9:30		
Middle Fork Dearborn, Downstream of Hwy 434					

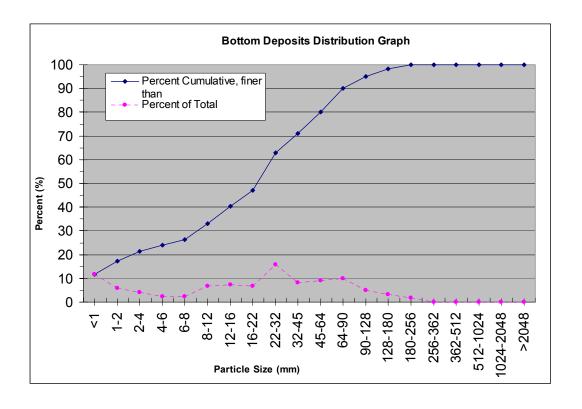
Geomorphology Data					
parameter	value	units			
Bankfull Width	34.50	Ft			
Mean Depth		Ft			
Bnkfull X-sect area		Sq Ft			
Width/Depth					
Max Depth	2.40	Ft			
Flood prone width	72.50	Ft			
Entrenchement Ratio	2.10				
Water slope	0.0074				
Channel Sinuosity					
BEHI Index Score (adjusted)					
BEHI Rating					
Channel D50		mm			
Percentage of Fines (<2mm)	17.36	%			
Stream Type					
Discharge	13.72	cfs			

Stream Reach Habitat Assessments					
Parameter	Value	Units			
Stream Reach Assessment Score (NRCS)	85	%			
Stream Reach Assessment Score (MT adjusted)	(MT adjusted) 86.8 %				
Macroinvertabrate Habitat Assessment Score		%			
OVERALL SITE RATIN	GS				
Stream Reach Assessment Score (NRCS)		paired, Fully ng, threatened			
Stream Reach Assessment Score (MT adjusted)					
Macroinvertabrate Habitat Assessment Score					

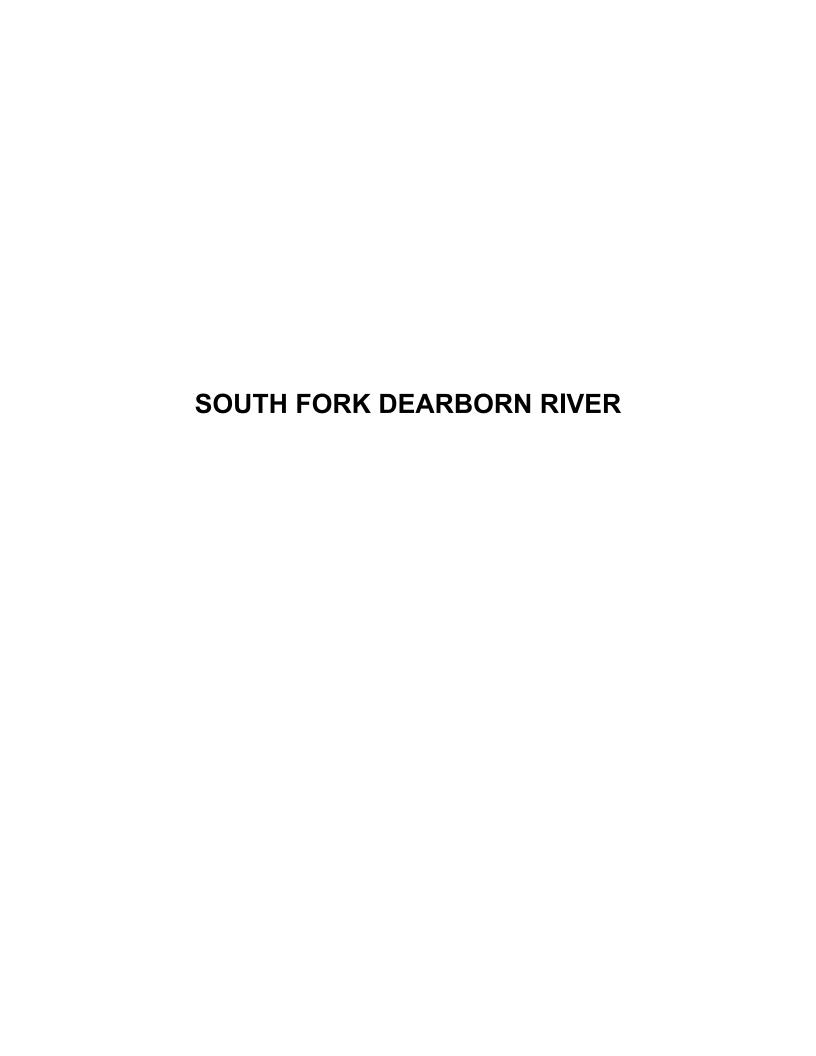
Field Measurements of water chemistry							
parameter value units							
Flow	13.72	cfs					
Temperature, water	13.35	degree C					
рН	8						
Specific Conductance	0.208	mS/cm					
Dissolved Oxygen	9.39	mg/L					
Dissolved Oxygen, % Saturation	90.2	%					
Turbidity	2.8	NTU					

Lab Results from Field Samples					
parameter	value	units	RL		
Total Suspended Solids, TSS	ND	mg/L	10		
Volatile Suspended Solids, VSS	ND	mg/L	10		
TSS-VSS	ND	mg/L	10		
Water Column Chlorophyll a	0.6	mg/m^3	0.1		
Benthic Chlorophyll a	22.2	mg/m^3	0.1		
Total Phosphorus, TP	ND	mg/L	0.004		
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5		
Nitrate + Nitrite	ND	mg/L	0.01		
Total Nitrogen, TN		mg/L			

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	14	11.57	11.57
S	1.5	1-2	7	5.79	17.36
FG	3	2-4	5	4.13	21.49
FG		4-6	3	2.48	23.97
FG		6-8	3	2.48	26.45
MG	10	8-12	8	6.61	33.06
MG		12-16	9		40.50
CG		16-22	8		47.11
CG		22-32	19		62.81
CG		32-45	10		71.07
CG		45-64	11	9.09	80.17
SC		64-90	12		90.08
SC		90-128	6		95.04
MC		128-180	4		98.35
LC		180-256	2	1.65	100.00
LC		256-362		0.00	100.00
SB		362-512		0.00	100.00
MB	768	512-1024		0.00	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	121	100.00	100.00
		D50 particle size (mr	n)		
		% Fines (<2mm)	17.36		
-	M12MFDBR02	Date-	6/19/2003		9:30
	Middle Fork Dearborn, Downstream of Hwy 434				



	BEHI Fiel	d Measures		BEHI Calcu	ılated Valu	ies
	Parameter	Value	Units	Parameter	Value	Units
_	Rod reading @ Upstream E	dae		Slope	0.0074	
ina ion	of Water	6.08	feet	Sinuousity		
Longitudinal Information	Rod reading @ Downstream	n		Max Depth	2.40	feet
	Edge of Water	9.18	feet	Floodprone Height	4.80	feet
	Stream Distance	420.00	feet	Mean Depth		feet
	Straightline Distance		feet	Bankfull Width	34.50	feet
=	Left Edge of Bankfull	0.00	feet	Floodplrone Width	72.50	feet
n a	Right Edge of Bankfull	34.50	feet	Bankfull Area		ft^2
ફું ફું	Rod reading @ Thalweg	4.80	feet	FloodproneArea		ft^2
Sec	Rod reading @ Bankfull De	oth 2.40	feet	W/D Ratio		
Cross-Sectional Information	Rod reading @ Floodplain I	Depth 0.00	feet	Cross Sectional Area	0.00	ft^2
	Left Edge of Floodprone de	pth 0.00	feet	Entrenchment Ratio	2.10	
O	Right Edge of Floodprone d	epth 72.50	feet			
n.	Bank Height		feet			
atic	Bankfull Height		feet	Bank Ht/Bankfull Ht		
Ĕ	Root Depth		feet	Root Depth/Bank Ht		
ۅٙ	Root Density		%	Root Density		%
=	Bank Angle		Degrees	Bank Angle		degrees
BEHI Information	Surface Protection		%	Surface Protection		%
Stress	Velocity at thalweg		ft/sec	Velocity Gradient		ft/sec/ft
tre on	Tape reading at thalweg		feet	Near Bank stress /		
ar Bank Stre Information	velocity at left bank		ft/sec	Mean Shear stress		
Bank format	tape reading at left bank		feet	A nb / A		
9 6	Near bank stress					
Near Inf	Mean shear stress					
Ž	Near bank x-sectional area		ft^2			



Waterbody Name Station ID ///125F7			(One Station per page)	Trip ID: 31003 DEBOTAD Date: 7/23/187
1	Visit # 2	© (Mou+)† Location	County Cong Clock	A HUC 10036108
t/Long obtained by meth	Long Od other than GPS? Y	Ver If Y what r	Lat/Long obtained by method other than GPS? Y N HY what method used? If by map what is the map scale?	GPS Datum (Circle One): NAD 27 NAD 83 WGS84 what is the man scale?
Samples Taken:		-	Semala Theory	LH
Water	Nutrients Metals Commons	1	OS OR SE LOCATION:	Sample Collection Procedure
Sediment			,	GRAB
9	Macroinvertebrate Habitat Asmt.		03-07-34-PA	CICE tues orther
hytes	Aquatic Plant Form		Da-chald	BEDLY CONTERD.
Chlorophyll a			13-01ac	1
Habitat Assessment	Stream Reach Asmt. Other			P. CHLYRL-Z OTHER:
Substrate	Pebble Count 7% Fines			rurpose: (**)
Transect				
Photographs				
Field Notes				
Other				
Measurements: Time:	6.945	Macroinne	Macrointenareheate Kiels Passad	
Q/Flow (cfs)	Est.	Site Vicit	Site Visit Commenter	Nick Length (Ft.): 35
Temp: (C) W	A 27.			
pH: 9	ah			
SC: (mS/cm) //	219			
SC x 1000 =	umbo/cm			
DO: (mg/L)	18,08			
TUR: Clear Slight Turbid Opaque	Turbid Opaque			
Turbidity Comments: 1.71	WO \$108 W.C.			

_	Vaterbody:	FD @	Month		03 - 0704 Station ID	MIZSF BBROY
p	Personnel:	20/71	φ.			
I	"Distance from initial point	**Depth	"Velocity (at point)	**Width	**Area	"Discharge
1	10 100	0	0			
2	20	8,20	8	-		
3	30	6,45	0,01			
4	40	0.52	0.07			
	5.0	0.50	0.22			
	6.0	0,40	0.17			
_	7.0	0.35	0.18			
	80	0.25	0.18			
	9.0	0.35	0.18			
	10.0	0,30	0.19			
11	11.0	0.35	6.19			
12	12.0	0.35	0,06			
13	13.0	0.38	D			
14	14,0	0.35	0,08			
15	15.0	0.40	0.25			
16	16.0	0.41	2.19			
	190	0.50	8.23			
18	18.0	0.50	0.18			
	19,0	0.50	0.15			
20	20,0	0.45	011			
21	21.0	5.40	0.08			
22	22.0	0,20	0,13			
23	23.000	0115	- 0			
24						
5						
6						
7						
8						
9						
10						

MACROINVERTE	BRATE HABITAT ASSESSM	ENT FIELD FORM	- Vanitary	E/RUN PREVALENCE
Date: 7/2	3/03	Site Visit Code	03-0724	
Personnel:	La dlaw Bown		Site: MIZSTRO	eay
PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed rifle; rifle as wide as stream & extends two times width of stream.	Riffle as wide as stream but length less than two times width.	Reduced niftle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
1A. score:	9//0 9-10	6-8	3-5	0-2
Comments:				
1B. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravel, sand, silt, or bedrock substrate.
1B. score:	9-10	9 4	3.5	0-2
Comments:				
Z. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 8.35 mm [.25*]).	Gravel, cobble, or boulder particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boolder particles are between 50-75% surrounded by fine sediment.	Gravet, cobble, or boulder particles are over 75% surrounded by fine sediment.
L score:	16-20 18	11-15	6-10	0-5
Comments:				
Channel Alteration (channelization, straightening, deedging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past afterations (before past 29 years) may be resent, but more recent channel afteration is not present.	New embankments present on both banks; 40-50% of the stream reach channelized & disrupted.	Banks shored with gabion or cement, over 80% of the stream reach channelized & disrupted.
score	15-20 16	11-15	6-10	0-5
Comments:	Rupel CONCINS			
4. Sediment Deposition	less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravet; 5- 20% of the bottom affected; slight deposition in pools.	new gravel, coarse sand on old & new bars; 30- 30% of the bottom affected; sediment deposits at obstructions, constrictions, & bends;	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
score.	16-20	11-15 [5]	6-10	D-S
Comments:		Sure Cours	ad he had	

5. Channel Flow Status	Water fills haseflow channel; minima amount of channel substrate exposed.	Water fills > 75% of the baseflow channel; < 25% channel substrate exposed,	Water fills 25-75% of the baseflow channel; riftle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
score	16-20	11-15 /5	6-10	0.5
Comments:			/L 00	
31000000	Service exchines a side of a service	Maria de la companya della companya		Market Comments
Bank Stability (score each bank) NOTE: Determine left or right side white facing downstream.	Banks stable; no evidence of erosion or bank failure; Rtile apparent potential for future problems.	infrequent, small areas of erosion mostly healed over,	Moderately unstable; moderate frequency & size of erosional areas; up to 50% of banks in reach have erosion; high erosion potential during high flow.	Unstable; many eroded areas; "raw" areas frequent along straight sections & bends; obvious bank sloughing; 60-100% of banks have erosion scars on sideslopes.
i, score:	9-10	6-8	3-5	0-2
	Left Side		9	
	2	Comments:		
	Right Side			
	Over 90% of the streambank surfaces covered by stabilizing vegetation; vegetative disruption minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by vegetation; disruption evident, but not affecting hull plant growth potential to any great extent; more than one-balf of potential plant height evident.	50-70% of the streambank surfaces covered in vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of potential plant height rumaining.	Less than 50% of the streamtent surfaces covered by vegetation; extensive disruption of vegetation; vegetation removed to 2 inches or less.
, score:	9-10	6-8	3-5	0-2
	Left Side		9	
	(C.	Average: Comments:		
	Right Side 7			
L Vegetated Zone Width (score each side)	Width of vegetated zone > 100 feet.	Width of vegetated zone 30-100 feet.	Width of vegetated zone 10-30 feet,	Width of vegstated zone < 10 feet.
score:	3-10 9	6-8	3-5	0-2
	Left Side A	-4000000	9	
		Average: Comments:		
	Right Side			
OTAL SCORE:		Score compared to	maximum possibl	e:

Long 12 13 23 25 25 25 25 25 25 2	Trip ID: 2013 - DR 8410 Date: 7/33/03 Personnel: 1 a Alans (8000 ten)
rig obtained by method other than GPS? Y N If Y what method used? If by map ves Taken: Nutrients Macroinvertebrate Habitat Asmt. Sumple ID/File Location	Clask HUC /0030/02
Samples Taken: Sediment Sediment Sediment Macroinvertebrate Stream Reach Asmt. Other Stream Reach Asmt. Other Substrate Chlorophyll a Transect Photographs Field Notes Other Macroinvertebrate Kick Duration: Site Visit Comments: Macroinvertebrate Massurements: Time: Signate Signate Macroinvertebrate Kick Duration: Signate Macroin	GPS Datum (Circle One): NAD 27, NAD 83 WGS84 what is the map scale?
Subject Commons Comm	
invertebrate Macroinvertebrate Habitat Asmt. O3_D3/4 Macrophytes Aquatic Plant Form D3_D3/4 Macrophytes Aquatic Plant Form D3_D3/4 Macrophytes Stream Reach Asmt. Other D3_D3/4 Cassessment Stream Reach Asmt. Other D3_D3/4 Cassessment Stream Reach Asmt. Other D3_D3/4 Casses D3_D3/4	Sample Collection Procedure
Macroinvertebrate Macroinvertebrate Habitat Asmt. 0.3 - 6 3.4 1.4	OKAB
Macrophytes □ Aquatic Plant Form 0.5-67.24 € phyll a □ Stream Reach Asmt. □ Other □ 0.5-67.24 € ate □ Pebble Count □ % Fines □ □ ct □ Pebble Count □ % Fines □ □ ct □ Pebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ ct □ Bebble Count □ % Fines □ □ <td>FICE HESS ATTEM</td>	FICE HESS ATTEM
Deble Count Stream Reach Asmt. Other	PERI-1 OTHER:
t Assessment Stream Reach Asmt. Other traphs Pebble Count % Fines traphs Pebble Count % Fines traphs Pebble Count % Fines traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs traphs	Cui but a commun.
tre ct	4
Cotes	Furpose:
raphs votes rements: Time:	
Comments: Time: S Site Visit Comments: Site Visit Comment	
Time:	
Macroinverrebrate Kick Duration: / 35 Site Visit Comments: Vem	
Site Visit Comments:	
J well	New Length (Ft.):
pH:	
SC. (mS/cm)	
SC x 1000 = µmiho/cm DO: (mg/L.) SA DS P P TUR: Clear Slight Turbid Opaque	
DO: (mg/L.)	
TUR: Clear ☑ Slight ☐ Turbid ☐ Opuque ☐	
Turbidity Comments: 7,75 8,95	

Wa	terbody: So	with rock	Upstream	Hay 431	Station ID:	MIZSFORRO
Per	sonnel: La	idhio Ja	CONGO			
	Distance from initial point	**Depth	"Velocity (at point)	."Width	"Area	**Discharge
1	10	0	0	8		
2	11	.25	0			
3	12	.2	.03			
4	(3)	- 2	0			
5	14	-38	.78			
6	15	.4	.77			
7	16	. 4	.46			
8	17	+3%	1.01			
9	18	,32	.44			
10	19	,30	157			
11	(3)	,35	10			
12	31	14	.67			
13	33	,38	.08			
14	23	.30	.18			
15	24	.25	.11			
16	26	12	0			
7	2/4	D	0	,		
8						
9						
10						
1						
2						
3					-	
4	-					
5						
6						
7						
3						
)						
0						

MACROINVERTE	BRATE HABITAT ASSESSN	MENT FIELD FORM	RIFFL	E/RUN PREVALENCE
Date: 7-22.0	3	Site Visit Code	03-0724	
CURRENTURE	h Fork Dearborn		Site: MIDSFOR	51200
Personnel:				
HABITAT	OPTIMAL	SUB-OPTIMAL		
PARAMETER	Well-developed riffle; riffle as wide	Riffle as wide as stream	MARGINAL	POOR
tA, Riffle Development	as stream & extends two times width of stream.		Reduced riffle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
A. score:	9-10	6-8	3-5	0-2
Comments:				
1B. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravet, sand, silt, or bedrock substrate.
B. score: +	5-10	6-8	3-5	0-2
Comments:	cobble groves			
2. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 6.35 mm [.25"]).	Gravel, cobble, or boulder particles are between 25-50 % surrounded by fine sediment.	Gravel, cubble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
score: //	16-20	11-15	6-10	0.5
Comments:	some but not go	ater than 2	540	
Channel Alteration (channelization, straightening, dradging, other alterations)	Channel alterations obsent or minimat; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past atterations (before past 20 years) may be resent, but more recent channel alteration is not present.	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gablion or cement; over 80% of the stream reach channelized & disrupted.
score;	16-20	11-15	6-10	0-5
Comments:				
	by sediment deposition.	from coerse gravel; \$- 30% of the bottom affected; slight deposition in pools.	new gravet, coarse sand on old & new bars; 30- 50% of the bottom affected; sediment deposits at obstructions, constrictions, & bends;	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
score: / [p	16-20	11-15	6-10	0-5
Comments:				

5. Channel Flow Status	Water fills baseflow channel; minimulamount of channel substrate exposed.	Water Fills > 75% of the baseflow channel; < 25% channel substrate exposed.	Water fills 25-75% of the baseflow channel; riffle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
L score:	16-20	11-15	6-10	0-5
Comments:				
Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream.	Banks stable; no evidence of erosion or bank failure; Ritle apparent potential for future problems.	infrequent, small areas of erosion mostly healed over.	Moderately unstable; Imoderate frequency & size of enosional areas; up to 60% of banks in teach have erosion; high erosion potential during high flow.	Unstable; many croded areas; "raw" areas frequent along straight sections & bends; obvious bank sloughing; 60-100% of banks have ereasion scars on sideslopes.
score: 8,5	9-10	64	3-5	0-2
	Left Side &	Average:		
	and the same of th	Comments Average:		
	Right Side	100000000000000000000000000000000000000		
Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual crops & weeds which do not field soil well (e.g. knapweed).	Over 90% of the streambank surface: covered by stabilizing vegetation; vegetative disruption minimal or not evident; almost sli plants allowed to grow naturally.	70-90% of the streambank surfaces covered by vegetation; disruption evident, but not affecting full plant growth potential to any great extent; more than one-half of potential plant height evident.	50.70% of the stransbank surfaces covered in vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of potential plant height remaining.	Less than 50% of the streambank surfaces covered by vegetation; extensive disruption of vegetation; vegetation removed to 2 inches or less.
score: U	5-10	6-8	3.4	0-2
	Left Side			
	Right Side	Comments:	-	
t. Vogetated Zone Width (score each side)	Width of vegetated zone > 100 feet.	Width of vegetated zone 30-100 feet.	Width of vegetated zone 10-30 feet.	Width of vegetated zone < 10 feet.
score: [/]	9-10	6-8	3-5	0-2
	Left Side			
	The state of the s	Average:		
	Right Side		horasde.	large buffer
OTAL SCORE:		5"	o maximum possibl	4

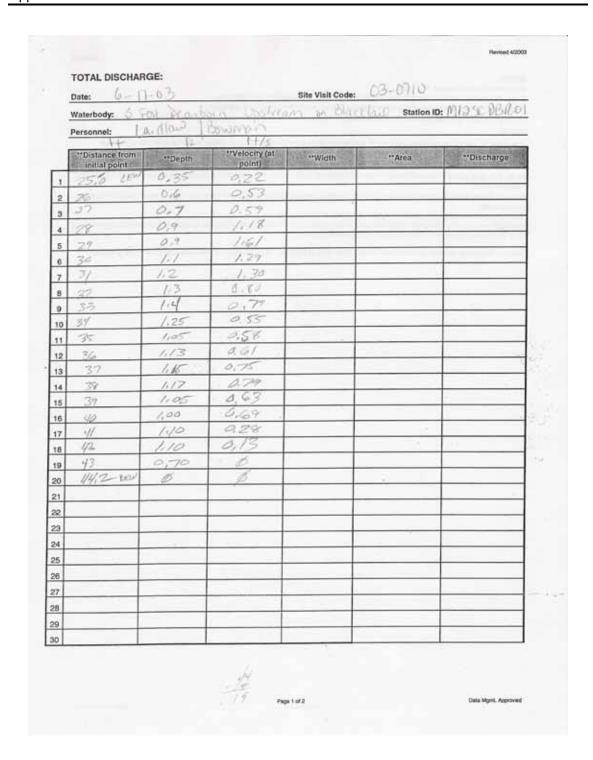
The proof of the proof by method other than GPS? Y N If Y what method used? If by map what is the map scale?	Naticrhody Name	
Long 11 5 5 Nab 83	Samples Taken: Samples Taken: Samples Taken: Samples Taken: Seamples Taken: Seample IDFile Lay Seamples Taken: Seample IDFile Lay Seamples Taken: Seample IDFile Lay Seample IDF	Leas & Clark HUC
Sample ID/File Location: Commons	Samples Taken: Water Water Sediment Sediment Macroinvertebrate Ma	By GPS Datum (Circle One): NAD 27 NAD 83 WGS84 1? If by map what is the map scale?
nent coinvertebrate Metals Commons Commons	nent oinvertebrate	-
Macroinvertebrate Habitat Asmt. O3 - 07 2 1 Macroinvertebrate Habitat Asmt. O3 - 07 2 Macroinvertebrate Habitat Asmt. O3 - 07 2 Macroinvertebrate Form Stream Reach Asmt. Other Stream Reach Asmt. Stream Reach Asmt. Stream Reach Asmt. Other Stream Reach Asmt. Stre	oinvertebrate	
Macroinvertebrate Macroinvertebrate Habitat Asmt. O3 - D3 C	oinvertebrate	SED-1
Ophyll a Stream Reach Asmi, Oother Cart Sight True; Clear Sight True dity Comments:	ophyll a Stream Reach Asmt. Other Stream Reach	
at Assessment Stream Reach Asms, Other rate Pebble Count % Fines sgraphs Macroinvertebrate Kick Duration; stream Reach Asms, Other sgraphs Macroinvertebrate Kick Duration; sgraphs Stream Reach Asms, Other sgraphs Macroinvertebrate Kick Duration; sgraphs Stream Reach Asms, Other sgraphs Macroinvertebrate Kick Duration; sgraphs Stream Reach Asms, Other sgraphs Macroinvertebrate Kick Duration; sgraphs Stream Reach Asms, Other sgraphs Macroinvertebrate Kick Duration; sgraphs Stream Reach Asms, Other sgraphs Macroinvertebrate Kick Duration; sgraphs Stream Reach Asms, Other sgraphs Stream Reach Asms, Other Reach Asms	ophyll a Stream Reach Asmi. Other Stream Reach	
at Assessment Stream Reach Asmi. Other cect Pebble Count % Fines graphs Notes Notes Notes Notes Sic Visit Comments: car Slight Turbid Opaque dity Comments Opaque dity Comments Opaque Opaque dity Comments Opaque Opaque dity Car Slight Opaque Opaque Opaque dity Ca	at Assessment Stream Reach Asmt, Other Interpretation Pebble Count % Fines Sect Pebble Count % Fines Sect Pebble Count % Fines Interpretation % Fines Interpreta	
Pebble Count % Fines	Pebble Count % Fines	
Street		
Site Visit Comments: Time: A	Notes	
Notes Notes Time: Part Bat	Notes	
Site Visit Comments: Time: A	Down (cfs) Time: Down (cfs) Est.	
Macroinvertebrate Kick Duration; Site Visit Comments; Site Vis	inv (cfs) iv (cf) iv (cf) iv (cf) iv (df) iv (f)	
Site Visit Comments:	Dow (cfs) Est.	
mS/cm) 1000 =	mS/cm) 274 jumbo/cm (mg/L) 9.56 m/cm (mg/L) 1000 m/cm (mg	ONOTES
mS/cm) 2.74 1000 = 2.74 (mg/L) 9.56 / 1/2 Clear Sight Turbid Opaq dity Comments: 3.77	mS/cm) 2.74 1000 = 2.74 (mg/L) 9.56 v. ff 10	
274 274 9.86 ns. [g. 10]	274 274 9.86 neff 10	
9, 56 mg/f /0	9, 56 mg/g 10	
ight Turbid Opaq	9. 56 mg/g / 10	
ight □ Turbid □ Opa	ight Turbid	
\$5 WTO 7	1	
	\$5 000 17	
		A STATE OF THE STA

-	Date: 7-12 Waterbody: S		endon I		e: 63-0723	MUZSENBRO
- 8		dlaw R				
F	"Distance from Initial point	**Depth	**Velocity (at point)	**Width	"Area	"Discharge
1	3.5	0 -	0	0		
2	45	.35	D	1		
3	5.5	.32	,20			
4	-66	50	126	1		
5	7.5	.50	.50	- VI		
6	8.5	.95	164			
7	9.5	.90	. 65			
8	10.5	.95	.44	0.		
9	111:5	1.0	.49			
10	12,5	1.0	.34	1		
11	13,5	9	,34	1		
12	14.5	185	,55			
13	55	.85	.54			
14	165	, 85	344			
15	17.5	, 95	0			
16	19.5	.25	.30			
17	19,5	.95	, 15			
18	20.5	1,05	, 01			
9	215	.92	101			
20	22.5	.50	0			
11	23.0	- 0	0 -	-		
2						
13						
4						
5						
6						
7						
8						
9						
0						

MACROINVERTE	BRATE HABITAT ASSESSM	ENT FIELD FORM	RIFFLE	E/RUN PREVALENCE
Date: 7-99-0	3	Site Visit Code:	63-0723	
Waterbody: 5 To	ick brokbyon like i	stactiant Rend	Site: 1/12.5F3/5/7	LOL
HABITAT PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed riffle; riffle as wide as stream & extends two times width of stream.	Riffle as wide as stream but length less than two times width.	Reduced riffle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
1A. score:	3-10	64	3-5	0-2
Comments:				
18. Denthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent.	Substrate dominated by bedrock, boulders, sand, or slit; cobble present.	Monotonous line gravel, sand, silt, or bedrock substrate.
18. score: 7	9-10	6-8	3-5	0-2
Comments:	wit of coppe			
2. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% aurrounded by fine sediment (particles less than 5.35 mm [.25"]).	Gravel, cobble, or boulder particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
2. score: 1 %	16-20	11-15	6-10	0.5
Comments:	looks great			
Channel Alteration (channelization, straightening, dredging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past alterations (before past 29 years) may be resent, but more recent channel alteration is not present.	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gablion or cement, over 30% of the stream reach channelized & disrupted.
Lacore: 70	16-20	11-15	6-10	0.5
Comments:				
4. Sediment Deposition	Little or no enlargement of bars & less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravet; 5- 30% of the bottom affected; slight deposition in pools.	new gravel, coarse sand on old & new bars; 30- 50% of the bottom affected; sediment deposits at obstructions, constrictions, & bends;	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; puds almost absent due to substantial sediment deposition.
4. score:	16-20	11-15	6-10	0-5
Commenta				

seach bank) NOTE: Determine left or right side while facing downstream: Score: 9-10 6-8 3-5 0-2 Left Side Average: Comments: Right Side Over 90% of the streambank surfaces covered by stabilizing vegetation; protection (score each bank) NOTE: reduces cores for annual crops & weeds which do not held soil well (e.g. knapwed). Left Side over 10 to 6-8 Average: Comments: Comments: 10-70% of the streambank surfaces covered by stabilizing vegetation; growth potential to any great extent; more than one-half of potential plant theight evident. Score over 10 to 60% of banks in react have recording fraging straight surfaces obvious problems as bends; obvious hank sloughing erosion scars on sideslopes. Comments: 10-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption or obvious; patches of bare soil or closely cropped vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; disruption
Banks stable; no evidence of erosion or bank failure; little apparent potential for future problems. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. Score: 9-10 6-8 Average: Comments: Right Side Over 90% of the streambank surfaces covered by stabilisting vegetation; production for annual crops & weeds which do not hold soil well (e.g., knapwsed). Score: 9-10 6-8 Average: Comments: Score: 9-10 6-8 Average: Comments: Score overed by stabilisting vegetation; give disruption minimal or not evident; almost all plants allowed in grow naturally. Comments: Comments: Score: 9-10 6-8 Average: Comments: Score: Comments: Score: Average: Comments: Score: Comments: Score: Average: Comments: Score: Average: Comments: Score: Average: Comments: Score: Average: Comments: Score: Comments: Score: Average: Comments: Score: Comments: Score: Comments: Score: Average: Comments: Score: Comments: Score: Average: Score: Score: Comments: Score: Comments: Score: Comments: Score: Score: Average: Score: Scor
s, Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream. Score: 9-10 6-8 3-5 0-2 Left Side Over 90% of the streambank surfaces rovered by stabilizing vegetation; regetative disruption minimal or not hold soil well (e.g. knapweed). Score: 9-10 6-8 3-5 0-2 Left Side Average: Comments: Comments: Comments: Comments: Comments: Score: 1
Left Side Right Side Over 90% of the streambank surfaces To-90% of the s
Right Side 8 Over 90% of the streambank surfaces 70-90% of the covered by stabilizing vegetation. Protection (score each bank) NOTE: reduce scores for annual crops & weeds which do not hold soil well (e.g. knapweed). **Right Side 8 Over 90% of the streambank surfaces 70-90% of the streambank surfaces covered by stabilizing vegetation; disruption obvious; patches of bare soil or crown naturally. Score: 9-19 Score: 9-19 Average: **Average: ** **A
7. Bank Vegetation Protection (score each bank) NOTE reduce scores for annual crops & weeds which do not hold soil well (e.g. knapweed). Score: 9-10 8. West Side Over 90% of the streambank surfaces of the streambank surfaces streambank surfaces streambank surfaces streambank surfaces covered by vegetation; disruption evident, but not affecting full plant prown naturally. Score: 9-10 6-8 3-5 0-2 Left Side Average:
T. Bank Vegetation Protection (some each by stabilizing vegetation; streambank surfaces covered by vegetation; streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or crown attrelly. Severeds which do not hold soil well (e.g. knapweed). T. score: 9-10 6-8 3-5 0-2 Average:
Left Side (Average:
Average:
Comments:
Right Side
I. Vegetated Zone Width of vegetated zone > 100 feet. Width of vegetated zone Width of vegetated zone 10-30 feet. Width of vegetated zone 10-30 feet. 10-30 feet
score: (Q 9-10 6-8 3-5 0-2
Left Side /D Average:
Flight Side / Comments:
TOTAL SCORE: Score compared to maximum possible:

RE MGS8	03-0/10-			(One Station per page) Tr	NS-DEEN
Location Visit # Location	aterbody Name	119	All Fork Destacra	Land to A Mark	Ton Sad
Long Register Long Register Name	ation ID ONTE	18	1.1	Wall st an	
Nutrients Metals Commons Sample ID/File Location: Macroinvertebrate Habitat Asmt. Other Aquatic Plant Form Aquatic Plant Form Stream Reach Asmt. Other Pebble Count % Fines Site Visit Comments: Macroinvertebrate Kick Duration: Kanchinvertebrate Kick Duration: Kanchin Aan Aaa Aan A	/Long obtained b	y met	hod other than GPS? Y N Y	Verified? By GPS Datum (Circ IY what method used? If by map what is the map sea	Dae): NAD 27 NAD 83
Mutrients Metals Commons Com	mples Taken:			Seconds Directory	l F
Macroinvertebrate Habitat Asmt. Aquatic Plant Form. Aquatic Plant Form.	nter	D	-	1_	Sample Collection Procedure
Macroinvertebrate Habitat Asmt. Aquatic Plant Form Aquatic Plant Form Aquatic Plant Form Aquatic Plant Form Asmt. Other Asmt. Other Asmt. Other Asmt. Other Asmt. Other Asmt.	fiment	Ø			GRAB
Aquatic Plant Form Other	croinvertebrate		Macroinvertebrate Habitat Asnut		SED-1
Stream Reach Asmt. Other Other	gae/Macrophytes		Aquatic Plant Form		KICK HESS OTHER:
Stream Reach Asmt. Other	lorophyll a	Ø		H I/ UNIDA	PERI-1 OTHER:
Time: St. Macroinvertebrate Kick Duration; Site Visit Comments:	bitnt Assessment	-	-	OTION CARA	CHLPHL-2 OTHER:
Time: St.	Notes to	+	a vive of the land of the land	A COUNTY	Purpose: AD
Time: Est.	Insect		repole Count % Fines X		
Time: Bst. Macroinvertebrate Kick Duration; W A Site Visit Comments: Immho/cm plumho/cm ght Turbid Opaque	otographs	N			
Time: Bit. Macroinvertebrate Kick Duration; W A Site Visit Comments: Limbo/cm Limbo/cm Limbo/cm	ld Notes				
Time: Est. Site Visit Comments: W A Site Visit Comments: Limbolem	ler.				
W A Site Visit Comments: Jumbo/cm Lumbid Opsque	asurements:	Ē	1116	acroinvertebrate Kiele Dusseicos	
W A A Jumbo/cm Jumbo/cm Sth	Flow (cfs)			ite Visit Commente:	Nick Length (Ft.):
punho/cm ght Turbid Opaque	mp: ('C')	W		The same comments.	
punho/cm punho/cm				Call Action of the Call of the	
ght 🗌 Turbid 🗍 Opaq	: (mS/cm)			STATE OF THE PARTY	200.00
ght 🗌 Turbid 🗀 Opaq	x 1000 =		umbo/cm	CHARLE WILLIAM TO AND THE PERSON OF THE PERS	
R: Clear Slight Turbid Opaque Didity Comments:); (mg/L)				
chidity Comments:	R: Clear N Sii	ght	Turbid Opaque		
	bidity Comments:				
The same of the sa				A CANADA CANADA	181 4



Date:	6-17						03-07	
Waterboo	ly: 5 Tol D	and.	orn-Blue	Had s	TORETS	tation ID:	MIRSED	6201
Personne	: Lada	3	Bowina	n				
				BBLE CO	UNT			
Row ID	Particle Catego	ory	Size (mm)	Riffle Count	(Other) Count	Chara	cteristic Grou	p: PEBL-CNT
						Sum	% of Total	Cum. Total
1	Silt / Clay		<1	57		0		0.00%
2	Sand		1-22	11		0		0.00%
3	Very Fine		2-4	Ø		0		0.00%
4	Fine		4-65.0			0		0.00%
5	Fine	1	6-8			0		0.00%
6	Medium	LS.	8 - 12	::		0		0.00%
7	Medium	GRAVELS	12-16	TT.		0		0.00%
8	Coarse	9	16 - 22	M		0		0.00%
9	Coarse	Ĭ	22 - 32	N		0		0.00%
10	Very Coarse	10	32 - 45	M		0		0.00%
11	Very Coarse		45 - 64	II		0		0.00%
12	Small		64 - 90			0		0,00%
13	Small	COBBLES	90 - 128	: '		0		0.00%
14	Large	COB	128 - 180	; '		0		0.00%
15	Large		180 - 256	0.7		0		0.00%
16	Small		256 - 362	**		0		0.00%
17	Small	RS	362 - 512	,,		0		0.00%
18	Medium	BOULDERS	512 - 1024			0	11 .5	0.00%
19	Large	BO	1024 - 2048	*		0		0.00%
20	Bedrock		> 2048			0		0.00%
21	Total # Samples			0	0	0	0.00%	

		Stream Rea	ich Assessmer	nt Form		Revision 3/200
Station ID:	MASSIDEROL			Site Visit Code:	03-07/	
Waterbody:	2 6 6 1	k Deadown Bl				
Waterbody S	GLINNS.		Personnel:	A 170		
Station ID's						
Question 1.	Stream Incisement					
s = channel s	stable, no active dow	moutting occurring; old de ennial riparian vegetation	owncutting appare will established in	nt but a new, stable the riparian area.	e riparian area h (Stage 1 and 5,	as formed within Schumm's
5 = channel h he falling ba	has evidence of old d inds, solid disturbanc	downcutting that has begue evident. (Stage 4).	un stabilizing, vege	etation is beginning	to establish, ev	en at the base o
t = small hea	adcut, in early stage,	is present. Immediate a	ction may prevent	further degradation	n (early Stage 2)	
egetation the	channel incised, act at is present is main!	tively widening, limited ne ly pioneer species. Bank	w riparian area/flo failure is common	odplain, floodplain i. (Stage 3)	not well vegetat	ed. The
= channel or r rare flood	deeply incised, resem events access the flo	nbling a gully, little or no r ood plain. Tributaries will	riparian area, activ also exhibit down	e downcutting is cl cutting/headcuts.	early occurring. (Stage 2)	Only occasiona
The presence	e of active headcuts :	should nearly always kee	ep the stream reac	h from being rated	sustainable.	
Actual Score:	_ 8	Potential Score:	_8			
comments						- ye se
vestion 2	Percent of Streamh	eanks with Active Later	al Cutting:			
		alance with the stream a				
		ctive lateral bank erosion				
		active lateral bank erosic				
	xcessive lateral bank					
ctual Score:	6	Potential Score:	6			
omments						
				- P	Watershed:	
uestion 3, T	The Stream is in Bal	ance with the Water an	d Sediment Bein	g Supplied by the		
= the stream		sediment/bedload deposi				ns as would be
= the stream spected in a	exhibits no excess a stable, dynamic syste	sediment/bedload deposi	ition, sediment occ	curs on point bars	and other locatio	ns as would be
= the stream spected in a = sediment of	exhibits no excess a stable, dynamic syste	sediment/bedload deposi em apparent in riffles or pool	ition, sediment occ	curs on point bars	and other locatio	ns as would be
= the stream spected in a = sediment o = mid-chann	n exhibits no excess a stable, dynamic syste clogged gravel's are a nel bars are common	sediment/bedload deposi em apparent in riffles or pool	ition, sediment occ	curs on point bars ce of excess sedin	and other location	ns as would be
= the stream spected in a = sediment o = mid-chann = stream is t	n exhibits no excess a stable, dynamic syste clogged gravel's are a nel bars are common	sediment/bedload deposi em apparent in riffles or pool	ition, sediment occurs, or other evidence stems), having at	curs on point bars ce of excess sedin	and other location	ns as would be
= the stream spected in a = sediment o = mid-chann	n exhibits no excess a stable, dynamic syste clogged gravel's are a nel bars are common	sediment/bedload deposi em apparent in riffles or pool rally occurring braided sy	ition, sediment occurs, or other evidence stems), having at	curs on point bars ce of excess sedin	and other location	ns as would be

	ient Soil Present to Hold Water and Act as a Rooting Medium:	
	of the riparian area with sufficient soil to hold water and act as a rooting medium	
	the riparian area with sufficient soil to hold water and act as a rooting medium	
	the riparian area with sufficient soil to hold water and act as a rooting medium	
0 = 35% or less of t	he riparian area with sufficient soil to hold water and act as a rooting medium	
Actual Score:	Potential Score:	
Comments		
Question 5, Perce	nt of Streambank with Vegetation having a Deep, Binding Rootmass: (see Appendix I for sta parian, and other, species)	ability
	of the streambank comprised of plant species with deep, binding root masses	
4 = 60% to 80% of t	he streambank comprised of plant species with deep, binding root masses	
	he streambank comprised of plant species with deep binding root masses	
	f the streambank comprised of plant species with deep binding root masses	
	6 Potential Score: 6	
Actual Score:	Potential Score:	
Comments		
Question 6, Weeds	*	
3 = No noxious wee	is are present	
2 = 0-1% of the ripar	ian area has noxious weeds	
	arian area has noxious weeds	
0 = over 5% of the ri	parian area has noxious weeds	
Actual Score:	Potential Score:	
Comments		
Overtion 7 Di turb	ance-Caused Undesirable Plants:	
	riparian area has undesirable plants	
	arian area has undesirable plants	
	parian area has undesirable plants	
	iparian area has undesirable plants	
= over 10% or the r		
Actual Score:	O Potential Score:	
Comments	74	
	e CDAE	4

evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian clive and/or saft cedar Actual Score: Potential					
6 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for trees and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented, or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re-evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian ofive and/or salt cedar Actual Score: Potential Score:			blishment and Regene	ration: (Note: Skip this	question if the riparian area has no
and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented, or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re-evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian oflive and/or salt cedar Actual Score: Potential Score stems are browsed 2 = 25%-50% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Comments	3 = all age classes of	of native woody r	iparian species present	(see table, Fig 2)	
or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re- evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or saft cedar Actual Score: Potential Score: Comments Cuestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0.5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 2.5%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = 2.5%-50% of the available second year and older stems are browsed. 3 = 80% or or they are high-lined or umbrella shaped. 0 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score: Potential Score: Comments Cuestion 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 3 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 155%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 155%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 155%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 155%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 155%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 155%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 155%-65% of the ripari	and shrubs, there m	ay be one age o	lass of each absent. Of	ten, it will be the middle a	esented. For sites with potential for trees age group(s) that is (are) lacking. Having
D = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re-evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt cedar Actual Score: Potential Score: Skip this question if the riparian area has no potential for woody species as 5%-25% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = 25%-50% of the available second year and older stems are browsed. 3 = 5%-25% of the available second year and older stems are browsed. 3 = 5%-25% of the available second year and older stems are browsed. 4 = 0-5% of the available second year and older stems are browsed. 5 = 76%-81% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6	4 = two age classes or the stand is comp	of native ripariar	n shrubs and/or two age nature, decadent or dea	classes of riparian trees d plants	clearly absent, other(s) well represented,
evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian clive and/or saft cedar Actual Score: Potential	2 = disturbance indu dominate. Re-evalu	iced, (i.e., faculta iate Question 1,	ative, facultative upland incisement, if this has his	species such as rose, or appened.	snowberry) or non-riparian species
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Comments Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 3 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 0 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 Actual Score: Potential Score:	Actual Scorer	4	Potential Score:	4	
Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 8 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = 100	Actual Score.		Totaliaa Goorei	7	
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= 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6	= 75%-85% of the	riparian/wetland	plant cover has a stabilit	y rating ≥ 6	
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Actual Score: 8 Potential Score: 8					
Comments	Actual Score:	8	Potential Score:	8	
	Comments				
	eg. iiii				
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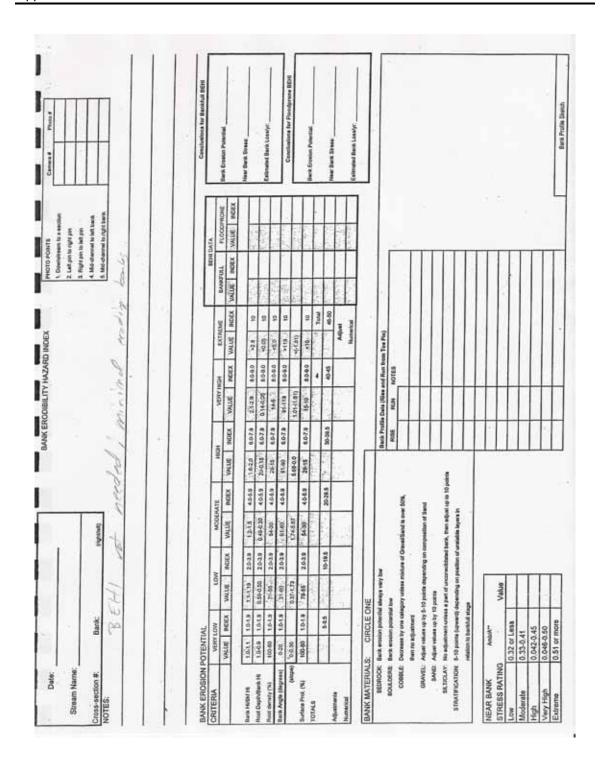
Question 11, Rip	arian Area/Floodplain Characteri	stics are Adequate to	Dissipate Ener	gy and Trap Sedim	ent.
2					d too
ordiment There	overflow channels, large rock, or v is little surface erosion and no evid- re are no headcuts where either ov	ence of long, continuou	s erosional areas	s on floodplain/ripari	an area or
t rock and/or w	pody material is present, but generational evidence of surface erosion.	ally of insufficient size to	dissipate energ	y. Some sediment	
	ck and/or woody material available				face erosion
scouring) and oc	casional headcuts where overland f	lows or flood channel fl	ows return to the	main channel.	
naterial suitable f	loodplain lacking any of these attrib or energy dissipation and sediment is adequate to resist further erosion the potential to create meander cut	trapping. Erosional are Surface erosion is ob	eas are long and	continuous. Lacking	g vegetation o
ctual Score:		core: 6			
ctual Score.			1		
	-				
Comments					
		SUMMARY			
					Potential
			Actual Score	Possible Points	Score
UECTION 1	Stream Incisement		0	0, 2, 4, 6, 8	0
UESTION 1: UESTION 2:	Lateral Cutting		0	0, 2, 4, 6	0
UESTION 3:	Stream Balance		0	0, 2, 4, 6	0
UESTION 4:	Sufficient Soil		0	N/A, 0, 1, 2, 3	0
	Rootmass		0	N/A, 0, 2, 4, 6	0
UESTION 5:	Weeds		0	0, 1, 2, 3	0
UESTION 6:	Undesirable Plants		0	0, 1, 2, 3	0
UESTION 7:	Woody Species Establishment		0	N/A, 0, 2, 4, 6, 8	0
UESTION 8:			0	N/A, 0, 1, 2, 3, 4	0
UESTION 9:	Browse Utilization	more *	- 0	N/A, 0, 2, 4, 6, 8	0
UESTION 10:	Riparian/Wetland Vegetative Co		- 0	N/A, 0, 2, 4, 6	0
UESTION 11:	Riparian Area/Floodplain Chara	ctensucs		1474, 0, 2, 4, 0	-
		Total		61	0
otential Score for	most Bedrock or Boulder streams (questions 1, 2, 3, 6, 7, 11)		0	(32)	0
otential Score for	most low energy *E* streams (questions 1 – 7, 10, 11)		0	(49)	0
ATING: =	Actual Score Potential Sco	X 100 = % rating	#DIV/0!		
	Alternative				
	80-100% = SUSTAINABLE 50-80% = AT RISK LESS THAN 50% = NOT SUST	AINABLE			
Only in certain, s	pecific situations can both of these	receive an "N/A".			

	Montana Department of Environmental Quality Supplemental Qu	estions
	e questions does not have an effect on the rating above, these questions must consider the potential of the stream.	
Question 12. Fish	heries Habitat / Stream Complexity Note: the answers to question 12 will be a	veraged
12a. Adult and Ju 8 = Abundant deep	uvenile Holding/Escape Cover o pools, woody debris, overhanging vegetation, boulders, root wads, undercut	banks and/or aquatic
6 Fish habitat is	common (see above).	
4 = Fish habitat is boulders, root wad	noticeably reduced. Most pools are shallow and/or w ody debris, undercut banks and/or aquatic vegetation are of limited supply.	ks, overhanging vegetation,
	tat features are sparse or non-existent or there are fish barriers.	
0 = There is not en	ough water to support a fishery	
	ld not support fish under natural conditions	
Actual Score:	Potential Score:	
Pictual Crovier	de till a back and ed Im To	ale vit
	Tellor I have been been been been been been been be	11.0
Comments	proset but not characteris	7165
12b. Habitat Com 6 = A mixture of juv	plexity venile and adult cover types is present. High flow juvenile and adult refugia are	present.
3 = Primarily adult of	or juvenile cover types are present. High flow refugia are reduced.	
0 = High flow refugi	ia are lacking.	
N/A = Stream would	d not support fish under natural conditions	
Actual Score:	3 Potential Score: 3	
Managara and Managara		
		
Comments		
12c. Spawning Ha	abitat (salmonid streams only) spawning substrate, morphology of spawning areas, and composition of spawni	no substrate are excellent
	spawning substrate, morphology of spawning areas, and/or quality of spawning	
	spawning substrate, morphology of spawning areas, and/or quality of spawning spawning substrate, morphology of spawning areas, and/or quality of spawning	
	spawning substrate, morphology of spawning areas, and/or quality of spawning a i not support fish under natural conditions.	sociale greatly reduced.
	Potential Score:	
Actual Score:	Potential Score:	
Comments		

0 = Potential fish pass	assage barriers			
0 = Potential fish pass N/A = Stream would n			ions	
	ot support iisii t	Potential Score		
Actual Score:		7 Otombal Coole		
Comments				
12e. Entraînment 8 = Entrainment of fish	h into water dive	rsions not an issue.		
4 = Entrainment of fish				
0 = Entrainment of fish	n into water dive	rsions may be a ma	ajor issue.	
Actual Score:	-6	Potential Score	8	
Comments				
12a-e Avg. Score	Actual Score	0	Potential Score	0
o vi so Color D	Indiation			
		h is adequately sha	ded by vegetation.	
6 = More than 75% of	the stream reac			wearshing is probably alongted by irrinating
6 = More than 75% of 4 = 50-75% of the stre	the stream reac am reach does	not have adequate	shading or the water ten	nperature is probably elevated by irrigatio
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5	the stream reac am reach does 50% of the strea	not have adequate im does not have a	shading or the water ten dequate shade.	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5 0 = More than 75% of	the stream reac am reach does 50% of the strea the stream reac	not have adequate im does not have a	shading or the water ten dequate shade.	nperature is probably elevated by irrigation
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5 0 = More than 75% of	the stream reac am reach does 50% of the strea the stream reac	not have adequate im does not have a h does not have ad	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5 0 = More than 75% of drastically altered by in	the stream reac am reach does 50% of the strea the stream reac	not have adequate im does not have a h does not have ad	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5 0 = More than 75% of drastically altered by in	the stream reac am reach does 50% of the strea the stream reac	not have adequate im does not have a h does not have ad	shading or the water ten dequate shade.	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-9 0 = More than 75% of drastically altered by in Actual Score:	the stream reac am reach does 50% of the strea the stream reac	not have adequate im does not have a h does not have ad	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-9 0 = More than 75% of drastically altered by in Actual Score:	the stream reac am reach does 50% of the strea the stream reac	not have adequate im does not have a h does not have ad	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5 0 = More than 75% of drastically altered by in Actual Score:	the stream reach am reach does 50% of the streat the stream reach rigation, etc.	not have adequate im does not have a h does not have ad Potential Score:	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-8 0 = More than 75% of drastically altered by in Actual Score: Comments Question 14. Algae 9	the stream reach does am reach does 50% of the stream reachingation, etc.	not have adequate im does not have ad h does not have ad Potential Score:	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5 0 = More than 75% of the drastically altered by in Actual Score: Comments Question 14. Algae g 5 = Algae not apparent	the stream reach does am reach does 50% of the stream reach the stream reachigation, etc.	not have adequate an does not have ad hidoes not have ad Potential Score:	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-5 0 = More than 75% of the stread of	the stream reach does am reach does 50% of the stream reach the stream reachigation, etc.	not have adequate an does not have ad hidoes not have ad Potential Score:	shading or the water ten dequate shade. equate shade by vegeta	
Approximately 25-5 0 = More than 75% of drastically altered by in Actual Score: Comments Question 14. Algae g 5 = Algae not apparent 4 = in small patches or 2 = in large patches or	the stream reach does am reach does 50% of the stream reachigation, etc.	not have adequate and does not have ad hidoes not have ad Potential Score:	shading or the water ten dequate shade. equate shade by vegeta	tion or the water temperature is probably
6 = More than 75% of 4 = 50-75% of the stre 3 = Approximately 25-5 0 = More than 75% of drastically altered by in Actual Score: Comments Question 14. Algae g 5 = Algae not apparent 4 = in small patches or 2 = in large patches or	the stream reach does am reach does 50% of the stream reachigation, etc.	not have adequate and does not have ad hidoes not have ad Potential Score:	shading or the water ten dequate shade. equate shade by vegeta	
6 = More than 75% of 4 = 50-75% of the stre 3 = Approximately 25-5 0 = More than 75% of drastically altered by in Actual Score: Comments Question 14. Algae g 5 = Algae not apparent 4 = in small patches or 2 = in large patches or	the stream reach does am reach does 50% of the stream reachigation, etc.	not have adequate and does not have ad hidoes not have ad Potential Score:	shading or the water ten dequate shade. equate shade by vegeta	tion or the water temperature is probably
6 = More than 75% of 4 = 50-75% of the stre 3 = Approximately 25-5 0 = More than 75% of drastically altered by in Actual Score: Comments Question 14. Algae g 6 = Algae not apparent 4 = in small patches or 9 = in large patches or 10 = Mats cover bottom N/A = No water	the stream reach does am reach does to stream reach does the stream reachigation, etc. Towth / Nutrien along channel addiscontinuous many (hyper enriched	not have adequate and does not have ad hidoes not have ad Potential Score: htts pery. edge hats conditions) or plan	shading or the water tendequate shade. equate shade by vegeta	tion or the water temperature is probably
6 = More than 75% of 4 = 50-75% of the stre 3 Approximately 25-3 0 = More than 75% of drastically altered by in Actual Score: Comments Question 14. Algae g 6 = Algae not apparent 8 = in small patches or 9 = Mats cover bottom 1/A = No water	the stream reach does am reach does to stream reach does the stream reachigation, etc. Towth / Nutrien along channel addiscontinuous many (hyper enriched	not have adequate and does not have ad hidoes not have ad Potential Score:	shading or the water tendequate shade. equate shade by vegeta	tion or the water temperature is probably
6 = More than 75% of 4 = 50-75% of the stre 3 = Approximately 25-3 0 = More than 75% of drastically altered by in Actual Score: Comments Question 14. Algae g 6 = Algae not apparent 4 = in small patches or 2 = in large patches or 0 = Mats cover bottom	the stream reach does am reach does to stream reach does the stream reachigation, etc. Towth / Nutrien along channel of discontinuous many (hyper enriched	not have adequate and does not have ad hidoes not have ad Potential Score: htts pery. edge hats conditions) or plan	shading or the water tendequate shade. equate shade by vegeta	tion or the water temperature is probably

6 = none						
4 = Slight						
2 = Moderate						
0 = Extensive						
N/A = No water						
Actual Score:	6	Potential Score	<u>6</u>	-		
Comments						
Question 16. Bacte	ria					
4 = There are no kno		ic sources of bacter	ia			
2 = Likely sources of				estock operations	are the most oc	mmon sources.
0 = Feedlots are com						
Actual Score:	4	Potential Score	//			
	pinvertebrates					
Question 17. Macro 4 = The stream has a lies, caddis flies and/	healthy and dive	erse community of n	nacroinvertebrates	s. Stream riffles u	sually have an a	abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/	healthy and dive or stone flies.				sually have an a	bundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor	healthy and dive or stone flies. ninated by pollut	ion tolerant taxa suc			sually have an a	bundance of may
Question 17. Macro	healthy and divi or stone flies. ninated by pollut es are rare or ab-	ion tolerant taxa suc			sually have an a	abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate N/A = Stream reach is	healthy and divi or stone flies. ninated by pollut es are rare or ab-	ion tolerant taxa suc			sually have an a	bundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate N/A = Stream reach is	healthy and divi or stone flies. ninated by pollut es are rare or ab-	ion tolerant taxa suc			sually have an a	abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate VA = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab-	ion tolerant taxa suc			sually have an a	bundance of may
Question 17. Macro 4 = The stream has a flies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate V/A = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab-	ion tolerant taxa suc			sually have an a	abundance of may
Question 17. Macro 4 = The stream has a flies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate	healthy and divi or stone flies. ninated by pollut es are rare or ab-	ion tolerant taxa suc			sually have an a	abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate VA = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab	ion tolerant taxa suc			sually have an a	abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate VA = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab	ion tolerant taxa suc			sually have an a	abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate VA = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab	ion tolerant taxa suc			sually have an a	abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate VA = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab	ion tolerant taxa suc				abundance of may
Question 17. Macro 4 = The stream has a lies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate VA = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab	ion tolerant taxa suc		e larva.		
Question 17. Macro 4 = The stream has a flies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate V/A = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab	ion tolerant taxa suc	ch as fly and midg	e larva.		
Question 17. Macro 4 = The stream has a flies, caddis flies and/ 2 = The stream is dor 0 = Macroinvertebrate V/A = Stream reach is Actual Score;	healthy and divi or stone flies. ninated by pollut es are rare or ab	ion tolerant taxa suc	ch as fly and midg	e larva.		

Question 18. Irrig Evaluate effects fro	ation impac om de-waterir	ts (As	sess during critical ster-basin transfer o	low flow perion of water.)	ods or you may i	need to inquire loo	ally about this.
8 = There are no no	oticeable imp	acts fr	om irrigation				
6 = Changes in flov organisms.							port aquatic
4 = Flows support a	equatic organ	isms, l	but habitat, especia	lly riffles are o	irastically reduc	ed or impacted.	
2 = The flow is low	enough to se	verely	impair aquatic orga	anisms			
0 = All of the water	has been div	erted f	rom the stream				
N/A = Stream reach	is ephemen	al.					
Actual Score:	_ 8	_	Potential Score:	8	-		
Comments							
Question 19. Land	luse activitie	s – S	ources				
8 = Landuse practic appear to be natura	I,						
6 = There are some timber harvesting, u	signs of imp rban, roads,	act fro	m landuse activities	s such as graz	zing, dryland ag	riculture, irrigation	, feedlots, mining,
4 = Impacts from lar	nduse activition	es are erosio	obvious and occur	throughout m	ost of the stream	m reach. For exa- ned.	mple, there are
2 = Landuse impact overwhelming evide 0 = Land use impact capable to support n	nce that the s ts are so intru	tream	is impaired. nat the stream has				provide pes not appear to be
	nout forms or	Cong. Cong.		8			
Actual Score:		ane	Potential Score:	soul-	longies	o' cotto	6
nents		Sana	Mrs. Wanne	11 hod	2150)	2 CHANG	7.00
otal Actual	0	_	Total Potential	0			
ATING	Total Potential	_×	100	#DIV/0!	=7.		
VERALL RATING			tal NRCS Actual +				#DIV/0!
	75-100% = 50-75% = 7 LESS THAM	AT RIS		ABLE			
							CDAE vie



oody Name ID Ogobained by Straken:	South Field & Collecte of De County	Location At		Personnel:
ined by	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		County Lines a Class	HUC JOSOLOS
es Taken:	han GPS? Y N	I If Y what	we Long	te One); NAD 27 NAD 83 WGS84
			Sample ID/Elle I conston:	-
	Nutrients Metals Commons	□ suom	53 07/11 1	Sample Collection Procedure
			000000	GRAB
Macroinvertebrate Macroinv	Macroinvertebrate Habites Acres		The state of the s	. SED-1
	Accounting Dilant Diam D			KICK HESS OTHER:
D	Tunou nom			PERI-1 OTHER:
1			03:0 IIIC COSSU & SPARKE	CHLPHL-2 OTHER:
Habitat Assessment Stream R	Stream Reach Asmt. Other	Ģ		V
	Pebble Count 76 Fines			rupose:
Transect				
Photographs				
Field Notes				
Other				
Measurements: Time:	30	Macroinv	Macroinvertehrate Kick Durasjour	4 44
Q / Flow (cfs)	Est	Site Vicit	Site Visit Commenter	Nick Length (PL.):
Temp: ('C) w	٧			
pH:		8	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
SC: (mS/cm)				
SC x 1000 =	umbo/cm			
DO: (mg/L)				
TUR: Clear Slight Turbid Opaque	Opagne			
Turbidity Comments:				
			A VALUE OF THE PARTY OF THE PAR	

W	sterbody: 50.		milarna		Station ID	MIDSFIBER
Pe	rsonnel:	ta da	(Bankasa)			
6	*Distance from initial point	"Depth	"Velocity (at point)	**Width	"Area	"Discharge
1	14,3 LEW	,3	0			
2	1513	14	139			
3	16.3	.65	154			
4	17.3	175	.79			
5	18.3	.70	.7/			
6	14.3	,60	.6%			
7 :	20.3	155	.73			
8	11.3	.55	.77			
	23	.55	-85			
10.	23.3	.50	.81			
11	24.3	+50	,83			
12	25.3	-55	.78			
13	26.3	,60	.53			
	27.3	.60	.68			
_	18.3	.50	-85			
	24.73	,55	404			
	30.3	.60	,76			
	31.3	65	70			
-	12.13	170	.63			
	5.3	.59	.65			
	4.3	. 65	.55			
1	5.3	55	50			
-	7.3	0	0			
-	7.3	- 0				
5						
6						
7						
8						
9						
0						

Date:	6-17-0	3			£ite V	isit Code	03-07	
Vaterboo	dy: 50 th T	OCK	Dadwin	S	TOPETS	tation ID:	MIDSE	064-04
ersonne	ol: La. dlaw	160	MAYON					
		-	PI	EBBLE CO	TNUC			
low ID	Particle Categ	ory	Size (mm)	Riffle Count	(Other) Count	Chara	cteristic Grou	p: PEBL-CNT
						Sum	% of Total	Cum. Total
1	Silt / Clay		<1	::		0		0.00%
2	Sand		1-2	PI		0		0.00%
3	Very Fine		2-4	II		0		0.00%
4	Fine	_	4-6			0		0.00%
5	Fine	7	6-8	U		0		0.00%
6	Medium	5	8-12	Ø		0		0.00%
7	Medium	GRAVELS	12 - 16	M::		0		0.00%
8	Coarse	9	16 - 22	河:		0		0.00%
9	Coarse	T	22 - 32	M:		0		0.00%
10	Very Coarse	-	32 - 45	Ø		0		0.00%
11	Very Coarse	10	45 - 64	M:		0		0.00%
12	Small		64 - 90	11		0		0.00%
13	Small	COECLES	90 - 128	F.		0		0.00%
14	Large	000	128 - 180	*		0		0.00%
15	Large		180 - 256	*		0		0.00%
16	Small		256 - 362	•		0		0.00%
17	Small	SHS	362 - 512	* *		0		0.00%
18	Medium	BOULDERS	512 - 1024			0		0.00%
19	Large	8	1024 - 2048			0		0.00%
20	Bedrock		> 2048			0		0.00%
21	Total # Samples			0	0	0	0.00%	

Station ID:	-17-03	Date:	0-17-03	Site Visit Code	: 03-0711	
Waterbody:	In Fork Re	about - Civille	Jenet .	Reach Length		
Waterbody Seg ID:			Personne	Ladlas	Bowmen	
Station ID's on reach:						
Question 1, Stream	Incisement:					
B = channel stable, no the incised channel, 1 model)	active downcutt There is perennia	I riparian vegetation	will established	in the riparian are	a. (Stage 1 and 5, \$	Schumm's
6 = channel has evide the falling bands, solid	ence of old downs d disturbance evi	cutting that has begu dent. (Stage 4).	n stabilizing, ve	getation is beginn	ng to establish, eve	en at the base o
t = small headcut, in						
e unstable, channel regetation that is pres	incised, actively sent is mainly pior	widening, limited nev neer species. Bank t	v riparian area/ failure is comm	loodplain, floodpla on. (Stage 3)	in not well vegetate	ed. The
0 = channel deeply in or rare flood events a	cised, resembling	a gully, little or no ri ain. Tributaries will	parian area, ac also exhibit dov	ive downcutting is ncutting/headcuts	clearly occurring. . (Stage 2)	Only occasiona
The presence of activ	e headcuts shoul	ld nearly always keep	o the stream rea	ach from being rat	ed sustainable.	
Actual Score:	8	Potential Score:	8			
Comments						
					- 4	
Question 2, Percent	of Streambanks	with Active Latera	I Cutting:			
				1.60		
= the lateral bank er	osion is in balanc	e with the stream an	d its setting			鬼
i = the lateral bank er = there is a minimal	osion is in balanc amount of active	e with the stream an lateral bank erosion	d its setting occurring			先
i = the lateral bank er = there is a minimal = there is a moderat	osion is in balanc amount of active e amount of activ	e with the stream an lateral bank erosion e lateral bank erosio	d its setting occurring			, A
Question 2, Percent 5 = the lateral bank er 4 = there is a minimal 2 = there is a moderat 0 = there is excessive actual Score:	osion is in balanc amount of active e amount of activ	e with the stream an lateral bank erosion e lateral bank erosio	d its setting occurring n occurring			75
i = the lateral bank er there is a minimal there is a moderat there is excessive	osion is in balanc amount of active e amount of activ lateral bank eros	e with the stream an lateral bank erosion e lateral bank erosio ion occurring	d its setting occurring n occurring			
s = the lateral bank er = there is a minimal = there is a moderat = there is excessive ctual Score:	osion is in balanc amount of active e amount of activ lateral bank erosi	e with the stream an lateral bank erosion e lateral bank erosio ion occurring Potential Score:	d its setting occurring in occurring	ing Supplied by	the Watershed:	
= the lateral bank er = there is a minimal = there is a moderat = there is excessive ctual Score: comments uestion 3, The Street = the stream exhibits	osion is in balance amount of active e amount of active lateral bank erosi	e with the stream an lateral bank erosion e lateral bank erosio ion occurring Potential Score:	d its setting occurring in occurring			ns as would be
= the lateral bank er = there is a minimal = there is a moderat = there is excessive ctual Score: omments uestion 3, The Street = the stream exhibits expected in a stable, d	osion is in balance amount of active e amount of active lateral bank erosi am is in Balance no excess sedin	e with the stream an lateral bank erosion a lateral bank erosion occurring Potential Score: with the "Jater and nent/bedlos d deposit	d its setting occurring in occurring	ccurs on point ba	rs and other locatio	ns as would be
= the lateral bank er = there is a minimal = there is a moderat = there is excessive ctual Score: comments cuestion 3, The Street = the stream exhibits expected in a stable, do = sediment clogged of	osion is in balance amount of active e amount of active lateral bank erosi am is in Balance no excess sedin ynamic system gravel's are appai	e with the stream an lateral bank erosion a lateral bank erosion occurring Potential Score: with the "Jater and nent/bedlos d deposit	d its setting occurring in occurring	ccurs on point ba	rs and other locatio	ns as would be
= the lateral bank er = there is a minimal = there is a moderat = there is excessive ctual Score:	osion is in balance amount of active e amount of active lateral bank erosi am is in Balance no excess sedin ynamic system gravel's are appai	e with the stream an lateral bank erosion e lateral bank erosion on occurring Potential Score: with the "/ater and nent/bedload deposition of the pools of	d its setting occurring in occurring in occurring if Sediment Be ison, sediment of s, or other evident	ccurs on point ba	rs and other locatio	ns as would be
= the lateral bank er = there is a minimal = there is a moderat = there is excessive ctual Score: comments cuestion 3, The Street = the stream exhibits expected in a stable, do = sediment clogged = mid-channel bars a	osion is in balance amount of active e amount of active lateral bank erosi am is in Balance no excess sedin ynamic system gravel's are appai	e with the stream an lateral bank erosion e lateral bank erosion on occurring Potential Score: with the "/ater and nent/bedload deposition of the pools of	d its setting occurring in occurring in occurring if Sediment Be ion, sediment of s, or other evidenterms), having a	ccurs on point ba	rs and other locatio	ns as would be

Question 4, Suffici	nt Soil Present to Hold Water and Act as a Rooting Medium:	
	f the riparian area with sufficient soil to hold water and act as a rooting medium	
	e riparian area with sufficient soil to hold water and act as a rooting medium	
	e riparian area with sufficient soil to hold water and act as a rooting medium	
0 = 35% or less of th	riparian area with sufficient soil to hold water and act as a rooting medium	
Actual Score:	Potential Score: 3	
Comments		
ratings for most rip	of Streambank with Vegetation having a Deep, Binding Rootmass: (see Appendix I for s trian, and other, species)	tability
6 = more than 80% c	the streambank comprised of plant species with deep, binding root masses	
	streambank comprised of plant species with deep, binding root masses	
	streambank comprised of plant species with deep binding root masses	
0 = less than 30% of	he streambank comprised of plant species with deep binding root masses	
Actual Score:		
Comments		
1 = 1%-5% of the rips	n area has noxious weeds ian area has noxious weeds irian area has noxious weeds 2 Potential Score: 3	
Comments	7 600 (40 (5 17)	
t = 1% or less of the rips = 1%-5% of the rips = 5%-10% of the rip	nce-Caused Undesirable Plants: parian area has undesirable plants ian area has undesirable plants rian area has undesirable plants arian area has undesirable plants	
ctual Score:	Potential Score:	
omments		

Comments Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 Actual Score: Potential Score:					
6 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for tree and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be revaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian ofive and/or salt cedar Actual Score: Potential Score: Potential Score: Comments Cuestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Comments Cuestion 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 75%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 10 = less than 55% of the riparian/wetland plant cover has a stabili			ishment and Regene	ration: (Note: Skip this question if the riparian area has no	0
and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riperian shrubs and/or two age classes of riperian trees clearly absent, other(s) well represented or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be revaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt cedar Actual Score: Potential Score showsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = the properties of the structure of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 75%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 155%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 10 = less than 55% of the riparian/wetland plant cover has a stability rating ≥ 6 11 = stability rating ≥ 6 12 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 13 = 55%-65% of the riparian/wetland plant cover has a	B = all age classes of	native woody rip	arian species present	(see table, Fig 2)	
or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be revaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian offive and/or salt cedar Actual Score: Potential Score: Potential Score: Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0.5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 0 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 65%-65% of the riparian/wetland plant cover has a stability rating ≥ 6	and shrubs, there may	be one age cla	ss of each absent. Of	ten, it will be the middle age group(s) that is (are) lacking. It	or trees Having
One some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be revaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian oflive and/or salt cedar Actual Score: Potential Score: Potential Score: Comments Cuestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) Species) Guestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 3 = 5%-55% of the available second year and older stems are browsed 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" growth form, or they are high-fined or umbrella shaped. 0 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score: Potential Score: Potential Score: Comments Guestion 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 100					sented,
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managada a a a a a a a a a a a a a a a a a	parian Area/Floodplain Charac				1000 E
ediment. There	r overflow channels, large rock, is little surface erosion and no ere are no headcuts where eithe	evidence of long, continue	ous erosional area	s on floodplain/ripari	an area or
= rock and/or w occurring. Occas	oody material is present, but ge ional evidence of surface erosic	enerally of insufficient size on. Generally not severe	e to dissipate energ enough to have de	gy. Some sediment sveloped channels.	trapping
scouring) and oc	ck and/or woody material availa casional headcuts where overla	and flows or flood channe	I flows return to the	main channel.	
naterial suitable f	loodplain lacking any of these a or energy dissipation and sedin is adequate to resist further ero the potential to create meander	nent trapping. Erosional sion, Surface erosion is r cut-offs.	areas are long and obvious on the floo	continuous. Lackin	g vegetation
Actual Score:	Potenti	ial Score:	-		
Comments					
	-	SUMMARY			
			Actual Score	Possible Points	Potential Score
UESTION 1: UESTION 2:	Stream Incisement		0	0, 2, 4, 6, 8	0
UESTION 3:	Stream Balance		. 0	0, 2, 4, 6	0
UESTION 4:	Sufficient Soil		0	N/A, 0, 1, 2, 3 N/A, 0, 2, 4, 6	0
UESTION 5: UESTION 6:	Rootmass Weeds		0	0, 1, 2, 3	0
UESTION 7:	Undesirable Plants		0	0, 1, 2, 3	0
UESTION 8:	Woody Species Establishm	ent	0	N/A, 0, 2, 4, 6, 8	0
UESTION 9:	Browse Utilization		0	N/A, 0, 1, 2, 3, 4	0
UESTION 10: UESTION 11:	Riparian/Wetland Vegetativ Riparian Area/Floodplain Cl		0	N/A, 0, 2, 4, 6, 8 N/A, 0, 2, 4, 6	0
oconor m		Tota	nl 0	61	0
ntential Score for	most Bedrock or Boulder strea	ms	0	(32)	0
	(questions 1, 2, 3, 6, 7, 11	1)			
otential Score for	most low energy "E" streams (questions 1 - 7, 10, 11)	i i		(49)	0
ATING: =	Actual Score Potential		#DIV/0!		
	80-100% = SUSTAINABLE				
	50-80% = AT RISK LESS THAN 50% = NOT SU	JSTAINABLE			
Only in certain	50-80% = AT RISK LESS THAN 50% = NOT SU pecific situations can both of the	EDONAL GARAGEST PAGE			

	Montana Dep	artment of Environs	nental Quality Supplemental	Questions
The score for these	e questions does n	ot have an effect on the	rating above.	
		ast consider the potentia		100
Question 12. Fish	neries Habitat / St	ream Complexity Note	the answers to question 12 will b	e averaged
12a. 7 dult and Ju 8 = Abundant deep	venile Holding/E pools, woody det	scape Cover oris, overhanging veget	ation, boulders, root wads, under	out banks and/or aquatic
6 = Fit h habitat is o	common (see abov	/e).		
4 = F(h habitat is r bould irs, root wads	noticeably reduced s and/or aquatic ve	. Most pools are shallo getation are of limited s	w and/or woody debris, undercut b supply.	anks, overhanging vegetation,
2 = Pools and habit	tat features are spi	arse or non-existent or	there are fish barriers.	
0 = There is not en	ough water to supp	oort a fishery		
		under natural conditions		
Actual Score:	8	Potential Score:	17	
Actual Coole.		_		
Comments				
12b. Habitat Com	plexity	ver types is present. Hi	gh flow juvenile and adult refugia a	re present.
			low refugia are reduced.	75 - 12 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
0 = High flow refugi				
		inder natural conditions		
	I HOL SUPPORT HOLL O	Potential Score:	6	
Actual Score:		Potential Score.	Y-1	
Comments			3 3 3 3	
		,		
	pawning substrate	, morphology of spawn	ing areas, and composition of spar	
			ing areas, and/or quality of spawni	
= Areal extent of s	pawning substrate	, morphology of spawn	ing areas, and/or quality of spawni	ng substrate greatly reduced.
N/A = Stream would	not support fish u	nder natural conditions.	12	
Actual Score:	-Z	Potential Score:	8	
Comments				
			5	SRAF.xis

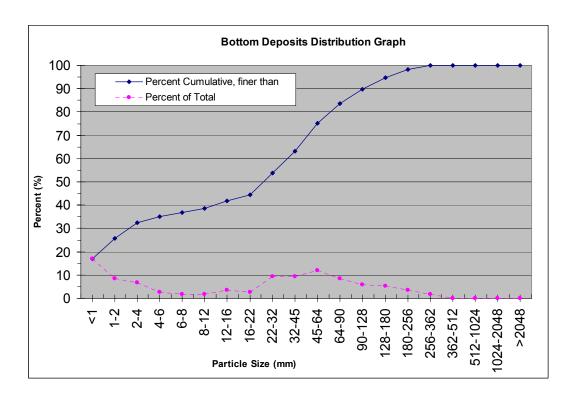
12d. Fish Passsage 3 = No potential fish po	ssage barriers	apparent.			
0 = Potential fish pass					
N/A = Stream would no	at support fish u	nder natural conditio	ns,		
Actual Score:	8	Potential Score:			
		11.000.000.000			
Comments					_
					-
12e. Entrainment 8 = Entrainment of fish	into water dive	rsions not an issue.			
4 = Entrainment of fish	into water dive	rsions may be a mod	erate issue.		
0 = Entrainment of fish	into water dive	rsions may be a majo	or issue.		
Actual Score: _	6	Potential Score:			
Comments					
12a-e Avg. Score	Actual Score	0	Potential Score	0	
	adiation				
Question 13. Solar R	adiation he stream reac	h is adequately shad	ed by vegetation.		
Question 13. Solar R	he stream reac	h is adequately shad	ed by vegetation. nading or the water ten	nperature is probably elevated by irriga	ation,
Question 13. Solar R 6 = More than 75% of t 4 = 50-75% of the stres	he stream reac am reach does	not have adequate sh	nading or the water ten	nperature is probably elevated by irriga	ation,
Question 13. Solar R 6 = More than 75% of t 4 = 50-75% of the strea 3 = Approximately 25-5	he stream reac am reach does : 0% of the strea	not have adequate st m does not have ade	nading or the water ten equate shade.		
Question 13. Solar R 6 = More than 75% of t 4 = 50-75% of the strea 3 = Approximately 25-5 0 = More than 75% of t	he stream reac am reach does 0% of the strea he stream reac	not have adequate st m does not have ade	nading or the water ten equate shade.	nperature is probably elevated by irrigition or the water temperature is proba	
Question 13. Solar R 6 = More than 75% of the 4 = 50-75% of the strea 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irre	he stream reac am reach does 0% of the strea he stream reac	not have adequate st m does not have ade h does not have ade	nading or the water ten equate shade. quate shade by vegeta		
Question 13. Solar R 6 = More than 75% of the 4 = 50-75% of the strea 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irre	he stream reac am reach does 0% of the strea he stream reac	not have adequate st m does not have ade	nading or the water ten equate shade. quate shade by vegeta		
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Question 13. Solar R 6 = More than 75% of the 4 = 50-75% of the strea 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irre	he stream reac am reach does 0% of the strea he stream reac	not have adequate st m does not have ade h does not have ade	nading or the water ten equate shade. quate shade by vegeta		
Question 13. Solar R 6 = More than 75% of t 4 = 50-75% of the stres 3 = Approximately 25-5 0 = More than 75% of t drastically altered by irr Actual Score:	he stream reach am reach does a 0% of the strea he stream reach ligation, etc.	not have adequate st m does not have ade h does not have adec Potential Score:	nading or the water ten equate shade. quate shade by vegeta		
Question 13. Solar R 6 = More than 75% of the streat 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irr Actual Score: Comments Question 14. Algae gr	he stream reach am reach does oo of the stream he stream reach igation, etc.	not have adequate st m does not have ade h does not have adea Potential Score:	nading or the water ten equate shade. quate shade by vegeta		
Question 13. Solar R 6 = More than 75% of t 4 = 50-75% of the strea 3 = Approximately 25-5 0 = More than 75% of t drastically altered by irr Actual Score: — Comments — Question 14. Algae gr 5 = Algae not apparent.	he stream reach am reach does : 0% of the strea he stream reach igation, etc. 3	not have adequate st rn does not have aded h does not have aded Potential Score:	nading or the water ten equate shade. quate shade by vegeta		
Question 13. Solar R 6 = More than 75% of the street 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irr Actual Score: Comments Question 14. Algae grides and apparent. 4 = in small patches or	he stream reach am reach does a 0% of the stream he stream reach igation, etc. 3 rowth / Nutrien Rocks are slip along channel o	not have adequate st m does not have ade h does not have adec Potential Score:_ ets pery.	nading or the water ten equate shade. quate shade by vegeta		
Question 13. Solar R 6 = More than 75% of the streat 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irr Actual Score: Comments Question 14. Algae gr 5 = Algae not apparent 4 = in small patches or the streat of the streat or the	the stream reach does in the stream reach does in the stream reachigation, etc. Country Cou	not have adequate st m does not have aded h does not have aded Potential Score:	nading or the water ten equate shade. quate shade by vegeta	tion or the water temperature is proba	
Question 13. Solar R 6 = More than 75% of the streat 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irr Actual Score: Comments Question 14. Algae grid algae and apparent. 4 = in small patches or the streat of the small patches or the s	the stream reach does in the stream reach does in the stream reachigation, etc. Country Cou	not have adequate st m does not have aded h does not have aded Potential Score:	nading or the water ten equate shade. quate shade by vegeta		
Question 13. Solar R 6 = More than 75% of the street 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irr Actual Score: Comments Question 14. Algae grides and apparent. 4 = in small patches or the street of the small patches or the street of the small patches or the small patche	the stream reach does in the stream reach does in the stream reachigation, etc. Country Cou	not have adequate st m does not have aded h does not have aded Potential Score:	anading or the water ten equate shade. quate shade by vegeta	tion or the water temperature is proba	
Question 13. Solar R 6 = More than 75% of the streat 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irreducing the streat of the str	he stream reach am reach does on of the stream he stream reach igation, etc. 3 rowth / Nutrien Rocks are slip along channel of discontinuous in hyper enriched	not have adequate st m does not have ade h does not have adea Potential Score:_ tts pery. sidge nats conditions) or plants	nading or the water ten equate shade. Quate shade by vegetar A In not apparent and rock	tion or the water temperature is proba	
Question 13. Solar R 6 = More than 75% of the streat 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irreducing the streat of the str	he stream reach am reach does on of the stream he stream reach igation, etc. 3 rowth / Nutrien Rocks are slip along channel of discontinuous in hyper enriched	not have adequate st m does not have ade h does not have adea Potential Score:_ tts pery. sidge nats conditions) or plants	anading or the water ten equate shade. quate shade by vegeta	tion or the water temperature is proba	
Question 13. Solar R 6 = More than 75% of the streat 3 = Approximately 25-5 0 = More than 75% of the drastically altered by irreducing the streat of the str	he stream reach am reach does on of the stream he stream reach igation, etc. 3 rowth / Nutrien Rocks are slip along channel of discontinuous in hyper enriched	not have adequate st m does not have ade h does not have adea Potential Score:_ tts pery. sidge nats conditions) or plants	nading or the water ten equate shade. Quate shade by vegetar A In not apparent and rock	tion or the water temperature is proba	

Question 15. Su	rface oils, turbidity, salinization, precipitants on stream bottom and/or water odor
6 = none	The only the order of the order
4 = Slight	
2 = Moderate	
0 = Extensive	
N/A = No water	
107 - 10 1110	
Actual Score:	Potential Score:
Comments	
Question 16. Bac	
	nown anthropogenic sources of bacteria
2 = Likely sources	of bacteria are present. Wastewater or concentrated livestock operations are the most common sources.
0 = Feedlots are co	mmon or raw sewage is entering the stream
Actual Score:	Potential Score:
Comments	
Question 17. Mad	roinvertebrates
4 = The stream has flies, caddis flies an	a healthy and diverse community of macroinvertebrates. Stream riffles usually have an abundance of may d/or stone files.
2 = The stream is d	ominated by pollution tolerant taxa such as fly and midge larva.
0 = Macroinvertebra	ites are rare or absent
N/A = Stream reach	is ephemeral
	4 4
Actual Score:	Potential Score:
Comments	
	7 SRAF.xls

Question 18. Irrig Evaluate effects fro	ation impacts m de-watering	(Assess during critical or inter-basin transfer o	low flow periods o of water.)	r you may need to inquire	locally about this.
3 = There are no no					
organisms.				er flows are adequate to	
				cally reduced or impacted	i.
= The flow is low	enough to sev	erely impair aquatic orga	inisms		
= All of the water	has been diver	rted from the stream			
VA = Stream reach	is ephemeral.				
Actual Score:	6	Potential Score:	8		
Actual Score.	1000	-4) an	1 dreum	however -	amples
	-	-accelor			
Comments	-	- Partie			
= Impacts from lar bytious signs of hur	rban, roads, et nduse activities nan induced e	tc. s are obvious and occur rosion, saline seeps or o	throughout most overgrazing within	of the stream reach. For the watershed.	
t = Impacts from lar obvious signs of hur 2 = Landuse impact overwhelming evide 0 = Land use impact apable to support n	rban, roads, et induse activities man induced e is are significar noe that the state is are so intrus	s are obvious and occur rosion, saline seeps or o nt and widespread. Visu ream is impaired. sive that the stream has	throughout most of overgrazing within hal observation and lost most of its nat	of the stream reach. For	example, there are
l = Impacts from lar obvious signs of hur l = Landuse impact overwhelming evide l = Land use impact apable to support n octual Score;	rban, roads, et induse activities man induced e is are significar noe that the state is are so intrus	s are obvious and occur rosion, saline seeps or o at and widespread. Visu ream is impaired. sive that the stream has aquatic life	throughout most of overgrazing within hal observation and lost most of its nat	of the stream reach. For the watershed. If photo documentation w	example, there are
l = Impacts from lar obvious signs of hur l = Landuse impact overwhelming evide l = Land use impact apable to support n octual Score;	rban, roads, et aduse activities man induced e s are significar noe that the stress are so intrustost forms of a	s are obvious and occur rosion, saline seeps or o nt and widespread. Visu ream is impaired. sive that the stream has aquatic life Potential Score:	throughout most of overgrazing within all observation and lost most of its nat	of the stream reach. For the watershed. If photo documentation w	example, there are ould provide
= Impacts from lar obvious signs of hur ? = Landuse impact overwhelming evide = Land use impact apable to support n octual Score;	rban, roads, et induse activities man induced e is are significar noe that the state is are so intrus	s are obvious and occur rosion, saline seeps or o at and widespread. Visu ream is impaired. sive that the stream has aquatic life	throughout most of overgrazing within hal observation and lost most of its nat	of the stream reach. For the watershed. If photo documentation w	example, there are ould provide
= Impacts from lar obvious signs of hur = Landuse impact overwhelming evide = Land use impact apable to support in actual Score;	rban, roads, et aduse activities man induced e s are significar noe that the stress are so intrustost forms of a	s are obvious and occur rosion, saline seeps or o nt and widespread. Visu ream is impaired. sive that the stream has aquatic life Potential Score:	throughout most of overgrazing within all observation and lost most of its nat	of the stream reach. For the watershed. If photo documentation w	example, there are
4 = Impacts from lar obvious signs of hur 2 = Landuse impact overwhelming evide	rban, roads, et induse activities man induced e s are significar noe that the stress are so intrustost forms of a control of the control of t	s are obvious and occur rosion, saline seeps or o nt and widespread. Visu ream is impaired. sive that the stream has aquatic life Potential Score: Total Potential	throughout most of overgrazing within tall observation and lost most of its national observation and the state of the stat	of the stream reach. For the watershed. If photo documentation wateral features. The stream the stream reach.	example, there are ould provide

M12SFDBR02	Date-	7/22/200	15:45
outh Fork of Dearborn at Thompsons Ranch,	above Hwy	134	
			_ [
Geomorphology I			
parameter Danieli i Milielle	value	units	_
Bankfull Width		Ft	_
Mean Depth Bnkfull X-sect area		Ft Sq Ft	-
Width/Depth		3411	_
Max Depth		Ft	
Flood prone width		Ft	
Entrenchement Ratio			
Water slope Channel Sinuosity			_
BEHI Index Score (adjusted)			-
BEHI Rating		<u> </u>	_
Channel D50	27	mm	
Percentage of Fines (<2mm)	25.64	%	
Stream Type			
Discharge	1.85	cts	
Stream Reach Habitat As	sessments		_
Parameter Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	Fulue	%	
Stream Reach Assessment Score (MT adjusted)		%	
Macroinvertabrate Habitat Assessment Score	84.2	%	
OVERALL SITE RATI	NGS		
Stream Reach Assessment Score (NRCS)			
			⊣ ■
Stream Reach Assessment Score (MT adjusted)			_
			1.5 min
Macroinvertabrate Habitat Assessment Score			
Macroinvertabrate Habitat Assessment Score			1.5 min 35'
Macroinvertabrate Habitat Assessment Score			
Macroinvertabrate Habitat Assessment Score Field Measurements of wa	ter chemis	try	
	value	units	
Field Measurements of wa parameter Flow	value 1.85	units cfs	
Field Measurements of wa parameter Flow Temperature, water	<i>value</i> 1.85 24.16	units cfs degree C	
Field Measurements of wa parameter Flow Temperature, water pH	value 1.85 24.16 8.43	units cfs degree C	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance	7.85 24.16 8.43 0.316	units cfs degree C mS/cm	
Field Measurements of wa parameter Flow Temperature, water pH	7.85 24.16 8.43 0.316	units cfs degree C mS/cm mg/L	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	1.85 24.16 8.43 0.316 8.67 103.2	units cfs degree C mS/cm mg/L	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen	1.85 24.16 8.43 0.316 8.67 103.2	units cfs degree C mS/cm mg/L %	
Field Measurements of wa parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	units cfs degree C mS/cm mg/L %	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8 Samples	units cfs degree C mS/cm mg/L %	35'
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8 Samples	units cfs degree C mS/cm mg/L % NTU	35'
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	units cfs degree C mS/cm mg/L % NTU units mg/L	35' RL 10
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value	units cfs degree C mS/cm mg/L % NTU units mg/L g/mg/L	35' RL 10 10
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L	35' RL 10
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	units cfs degree C mS/cm mg/L % NTU units mg/L units mg/L mg/L	35' RL 10 10 10
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	35' RL 10 10 10 0.1
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	RL 10 10 10 0.1 0.1 0.004
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Dataparameter	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Dataparameter TOTAL SCORE (max = 18)	value 1.85 24.16 8.43 0.316 8.67 103.2 0.8	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.1 0.004 0.5

		Pebble Count Data				
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total	
S/C	0.5	<1	20	17.09	17.09	
S	1.5	1-2	10	8.55	25.64	
FG	3	2-4	8	6.84	32.48	
FG	5		3	2.56	35.04	
FG	7	• •	2	1.71	36.75	
MG		8-12	2	1.71	38.46	
MG		12-16	4	3.42	41.88	
CG		16-22	3	2.56	44.44	
CG		22-32	11	9.40	53.85	
CG		32-45	11	9.40	63.25	
CG		45-64	14	11.97	75.21	
SC		64-90	10	8.55	83.76	
SC		90-128	7	5.98	89.74	
MC		128-180	6	5.13	94.87	
LC		180-256	4	3.42	98.29	
LC		256-362	2	1.71	100.00	
SB		362-512		0.00	100.00	
MB	768	512-1024		0.00	100.00	
LB	1536	1024-2048		0.00	100.00	
BR		>2048		0.00	100.00	
		TOTALS	117	100.00	100.00	
		D50 particle size (mm)				
		% Fines (<2mm)	25.64			
	M12SFDBR02	Date-	7/22/2003		15:45	
	South Fork of Dearborn at	Thompsons Ranch, at	ove Hwy 434			



	Date-	7/23/2003	9:
South Fork Dearborn, at Confluence with Dearb	orn River		
Geomorphology Dat	ta		
parameter	value	units	
Bankfull Width		Ft	
Mean Depth		Ft	
Bnkfull X-sect area		Sq Ft	
Width/Depth		F4	
Max Depth Flood prone width		Ft Ft	
Entrenchement Ratio	1	Γι	-
Water slope			
Channel Sinuosity			1
BEHI Index Score (adjusted)			
BEHI Rating			
Channel D50	18	mm	
Percentage of Fines (<2mm)		%	
Stream Type			
Discharge	1.15	cfs	
			_
			_
Stream Reach Habitat Asse	ssments		
Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	98.4	%	
Stream Reach Assessment Score (MT adjusted)	97.1	%	
Macroinvertabrate Habitat Assessment Score	84.6	%	
OVERALL SITE RATING	-		
Stream Reach Assessment Score (NRCS)		aired, Fully	
Sucam reactive describing and the control of the co	Supp	oorting	
Stream Reach Assessment Score (MT adjusted)			
Stream Reach Assessment Score (MT adjusted)			
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score			2 min
· · · · · · ·			2 min 35'
· · · · · · · · · · · · · · · · · · ·			
Macroinvertabrate Habitat Assessment Score			
Macroinvertabrate Habitat Assessment Score Field Measurements of water			
Macroinvertabrate Habitat Assessment Score Field Measurements of water parameter	value	units	
Macroinvertabrate Habitat Assessment Score Field Measurements of water parameter Flow	value 1.15	units cfs	
Macroinvertabrate Habitat Assessment Score Field Measurements of water parameter Flow Temperature, water	value 1.15 16.72	units cfs degree C	
Field Measurements of water parameter Flow Temperature, water pH	1.15 16.72 8.4	units cfs degree C	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance	1.15 16.72 8.4 0.319	units cfs degree C mS/cm	
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen	1.15 16.72 8.4 0.319 10.08	units cfs degree C mS/cm mg/L	
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	1.15 16.72 8.4 0.319 10.08	units cfs degree C mS/cm mg/L %	
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	1.15 16.72 8.4 0.319 10.08	units cfs degree C mS/cm mg/L	
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	1.15 16.72 8.4 0.319 10.08	units cfs degree C mS/cm mg/L %	
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity	value 1.15 16.72 8.4 0.319 10.08 104 1.4	units cfs degree C mS/cm mg/L %	
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa	value 1.15 16.72 8.4 0.319 10.08 104 1.4	units cfs degree C mS/cm mg/L % NTU	35'
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field Saparameter	value 1.15 16.72 8.4 0.319 10.08 10.4 1.4 1.4	units cfs degree C mS/cm mg/L % NTU	35'
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS	value 1.15 16.72 8.4 0.319 10.08 104 1.4 1.4	units cfs degree C mS/cm mg/L % NTU units mg/L	35' RL 10
Field Measurements of water parameter Flow Temperature, water oH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value 1.15 16.72 8.4 0.319 10.08 104 1.4 1.4	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L	35'
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Sa	value 1.15 16.72 8.4 0.319 10.08 104 1.4 1.4	units cfs degree C mS/cm mg/L % NTU units mg/L	35' RL 10 10
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	value 1.15 16.72 8.4 0.319 10.08 104 1.4 1.4	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M^3	35' RL 10 10 10
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/m^3	RL 10 10 10 0.1
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/m^3	35' RL 10 10 0.1 0.1 0.1
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m/3 mg/m^3 mg/L	RL 10 10 0.1 0.1 0.004
Field Measurements of water parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 1.15 16.72 8.4 0.319 10.08 10.08 10.4 1.4	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M mg/M mg/M mg/M mg/M mg/M mg/M mg/M	RL 10 10 0.1 0.1 0.10 0.10 0.10 0.004
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 1.15 16.72 8.4 0.319 10.08 10.08 10.4 1.4	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M mg/M mg/M mg/M mg/M mg/M mg/M mg/M	RL 10 10 0.1 0.1 0.10 0.10 0.10 0.004
Field Measurements of water parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field Saparameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 1.15 16.72 8.4 0.319 10.08 10.08 10.4 1.4	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M mg/M mg/M mg/M mg/M mg/M mg/M mg/M	RL 10 10 0.1 0.1 0.10 0.10 0.10 0.004

130 Final Report

parameter

TOTAL SCORE (max =18)
PERCENT OF MAX SCORE
IMPAIRMENT CLASSIFICATION
USE SUPPORT

value

units

13 score 72 %
SLIGHT IMPAIRMENT
PARTIAL SUPPORT

M12SFDBR01	Date-	7/22/200	03 14:
South Fork Dearborn, Upstream site on Blackt	ail Ranch		
			_
Geomorphology I			
parameter Doministral Ministra	value	units	
Bankfull Width		Ft Ft	
Mean Depth Bnkfull X-sect area		Sq Ft	_
Width/Depth	+	3411	_
Max Depth		Ft	
Flood prone width		Ft	
Entrenchement Ratio			
Water slope			
Channel Sinuosity BEHI Index Score (adjusted)			
BEHI Rating			
Channel D50	27	mm	_
Percentage of Fines (<2mm)	21	%	
Stream Type			
Discharge	4.84	cfs	
			_
			_
Stream Reach Habitat As			
Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	100		
Stream Reach Assessment Score (MT adjusted)	99.3		
Macroinvertabrate Habitat Assessment Score OVERALL SITE RAT	89.6	%	
OVERALL SHE RATI	INGS		_
Stream Reach Assessment Score (NRCS)	Non Impaire	d, Fully Supporti	ng
Stream Reach Assessment Score (MT adjusted)			
· · · · · ·			2 min
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score			2 min 50'
· · · · · ·			
· · · · · ·			
· · · · · ·		try	
Macroinvertabrate Habitat Assessment Score Field Measurements of wa parameter	value	units	
Macroinvertabrate Habitat Assessment Score Field Measurements of wa parameter Flow	value 4.84	units cfs	
Macroinvertabrate Habitat Assessment Score Field Measurements of wa parameter Flow Temperature, water	value 4.84 18.55	units cfs degree C	
Field Measurements of wa parameter Flow Temperature, water	value 4.84 18.55 8.39	units cfs degree C	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance	value 4.84 18.55 8.39 0.274	units cfs degree C mS/cm	
Field Measurements of wa parameter Flow Temperature, water	value 4.84 18.55 8.39 0.274	units cfs degree C mS/cm mg/L	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen	value 4.84 18.55 8.39 0.274 9.36 100	units cfs degree C mS/cm mg/L	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	value 4.84 18.55 8.39 0.274 9.36 100	units cfs degree C mS/cm mg/L %	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity	value 4.84 18.55 8.39 0.274 9.36 100 1.28	units cfs degree C mS/cm mg/L %	
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field	value 4.84 18.55 8.39 0.274 9.36 100 1.28 Samples	units cfs degree C mS/cm mg/L %	50'
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter	value 4.84 18.55 8.39 0.274 9.36 100 1.28 Samples value	units cfs degree C mS/cm mg/L % NTU	50'
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS	value 4.84 18.55 8.39 0.274 9.36 100 1.28 Samples value ND	units cfs degree C mS/cm mg/L % NTU units mg/L	50'
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value 4.84 18.55 8.39 0.274 9.36 100 1.28 Samples value ND ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L	50' RL 10 10
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	value	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L	50' RL 10 10 10
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 10 0.1
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	value	wnits cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/m^3	50' RL 10 10 10
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 10 0.1 0.1 0.1
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	value 4.84 18.55 8.39 0.274 9.36 100 1.28 Samples Value ND ND ND ND ND ND ND O.078	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/m^3 mg/L	RL 10 10 10 0.11 0.10 0.004
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.04 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.04 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.04 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.04 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.04 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Dat parameter TOTAL SCORE (max = 18)	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.04 0.5
Field Measurements of wa parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Dat parameter	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.01 0.004 0.5

M12SFDBR01	Date-	6/17/2003	11:15			
South Fork Dearborn, Upstream site on Blackta	South Fork Dearborn, Upstream site on Blacktail Ranch					

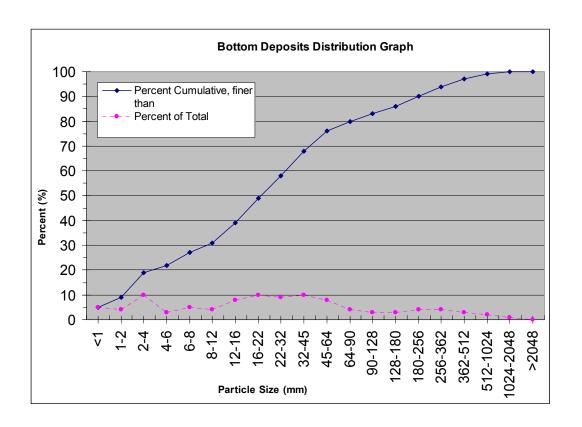
Geomorphology Data					
parameter	value	units			
Bankfull Width		Ft			
Mean Depth		Ft			
Bnkfull X-sect area		Sq Ft			
Width/Depth					
Max Depth		Ft			
Flood prone width		Ft			
Entrenchement Ratio					
Water slope					
Channel Sinuosity					
BEHI Index Score (adjusted)					
BEHI Rating					
Channel D50		mm			
Percentage of Fines (<2mm)	9.00	%			
Stream Type					
Discharge	13.98	cfs			

Stream Reach Habitat Assessments					
Parameter	Value	Units			
Stream Reach Assessment Score (NRCS)	100	%			
Stream Reach Assessment Score (MT adjusted)	99.3	%			
Macroinvertabrate Habitat Assessment Score		%			
OVERALL SITE RATIN	IGS				
Stream Reach Assessment Score (NRCS)		npaired, Fully opporting			
Stream Reach Assessment Score (MT adjusted)					
Macroinvertabrate Habitat Assessment Score					

Field Measurements of water chemistry						
parameter value units						
Flow	13.98	cfs				
Temperature, water		degree C				
pH						
Specific Conductance		mS/cm				
Dissolved Oxygen		mg/L				
Dissolved Oxygen, % Saturation		%				
Turbidity		NTU				

Lab Results from Field Samples				
parameter	value	units	RL	
Total Suspended Solids, TSS	ND	mg/L	10	
Volatile Suspended Solids, VSS	ND	mg/L	10	
TSS-VSS	ND	mg/L	10	
Water Column Chlorophyll a	0.9	mg/m^3	0.1	
Benthic Chlorophyll a	16.5	mg/m^3	0.1	
Total Phosphorus, TP	ND	mg/L	0.004	
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5	
Nitrate + Nitrite	ND	mg/L	0.01	
Total Nitrogen, TN		mg/L		

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	5	5.00	5.00
S	1.5	1-2	4	4.00	9.00
FG	3	2-4	10	10.00	19.00
FG		4-6	3	3.00	22.00
FG	7	6-8	5	5.00	27.00
MG		8-12	4	4.00	31.00
MG	14	12-16	8	8.00	39.00
CG	18	16-22	10	10.00	49.00
CG		22-32	9	9.00	58.00
CG		32-45	10	10.00	68.00
CG	54.5	45-64	8	8.00	76.00
SC	77	64-90	4	4.00	80.00
SC	109	90-128	3	3.00	83.00
MC		128-180	3	3.00	86.00
LC		180-256	4	4.00	90.00
LC	309	256-362	4	4.00	94.00
SB	437	362-512	3	3.00	97.00
MB	768	512-1024	2	2.00	99.00
LB	1536	1024-2048	1	1.00	100.00
BR		>2048		0.00	100.00
		TOTALS	100	100.00	100.00
		D50 particle size (mm)	22-32		
		% Fines (<2mm)	9.00		
M12SFDBR01	Date-	6/17/2003	11	1:15	
South Fork Dearborn, Up	ostream site on Bla	cktail Ranch			



M12SFDBR04	Date-	6/17/2003	15:25
South Fork Dearborn, at Confluence with Dearb	orn River		

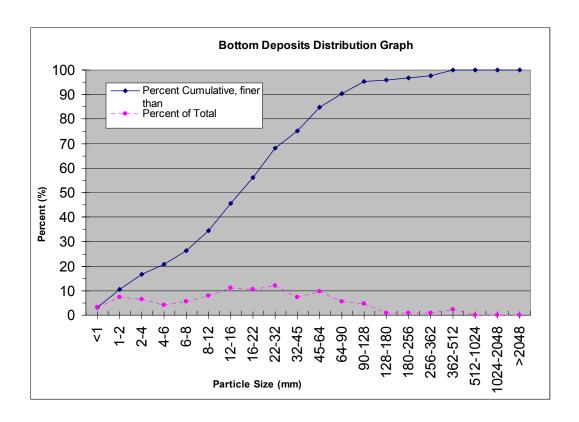
Geomorphology Data			
parameter	value	units	
Bankfull Width		Ft	
Mean Depth		Ft	
Bnkfull X-sect area		Sq Ft	
Width/Depth			
Max Depth		Ft	
Flood prone width		Ft	
Entrenchement Ratio			
Water slope			
Channel Sinuosity			
BEHI Index Score (adjusted)			
BEHI Rating			
Channel D50		mm	
Percentage of Fines (<2mm)	10.40	%	
Stream Type			
Discharge	8.85	cfs	

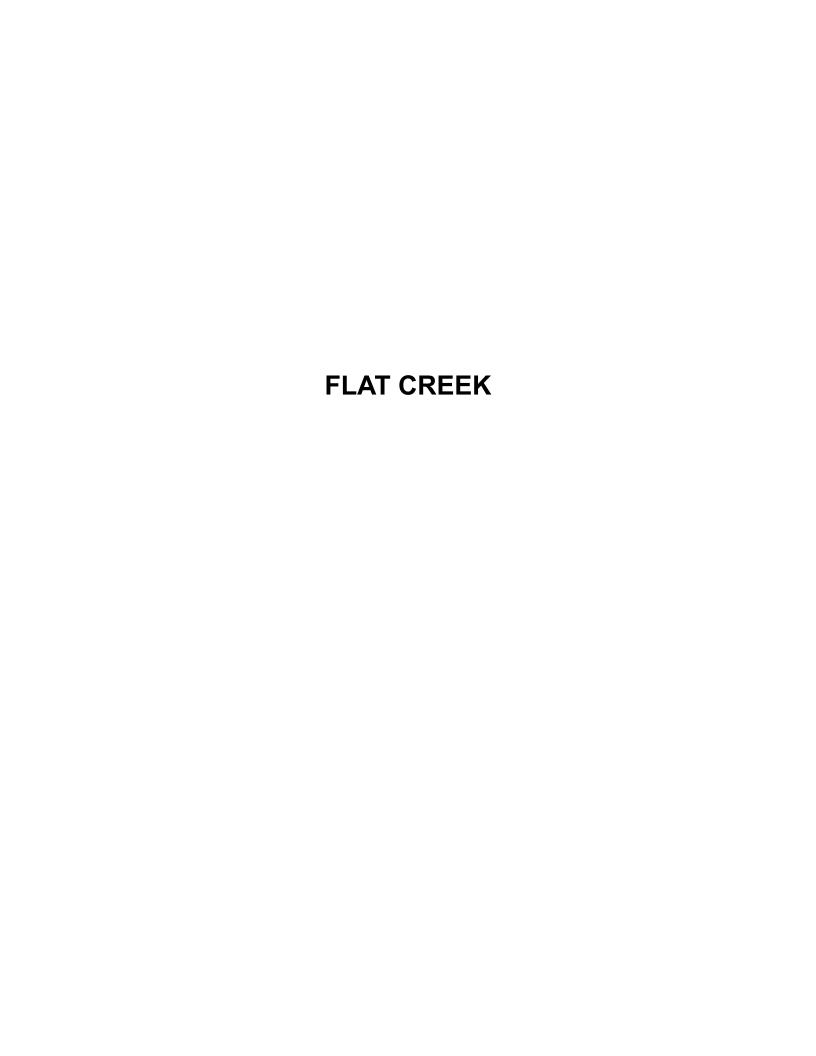
Stream Reach Habitat Assessments				
Parameter Parameter	Value	Units		
Stream Reach Assessment Score (NRCS)	98.4	%		
Stream Reach Assessment Score (MT adjusted)	97.1	%		
Macroinvertabrate Habitat Assessment Score		%		
OVERALL SITE RATINGS				
Stream Reach Assessment Score (NRCS)	Non Impaired, Fully Supporting			
Stream Reach Assessment Score (MT adjusted)				
Macroinvertabrate Habitat Assessment Score				

Field Measurements of water chemistry			
parameter	value	units	
Flow	8.85	cfs	
Temperature, water		degree C	
рН			
Specific Conductance		mS/cm	
Dissolved Oxygen		mg/L	
Dissolved Oxygen, % Saturation		%	
Turbidity		NTU	

Lab Results from Field Samples			
parameter	value	units	RL
Total Suspended Solids, TSS	ND	mg/L	10
Volatile Suspended Solids, VSS	ND	mg/L	10
TSS-VSS	ND	mg/L	10
Water Column Chlorophyll a	ND	mg/m^3	0.1
Benthic Chlorophyll a	27.6	mg/m^3	0.1
Total Phosphorus, TP	ND	mg/L	0.004
Total Kiejdahl Notrogen, TKN	0.5	mg/L	0.5
Nitrate + Nitrite	ND	mg/L	0.01
Total Nitrogen, TN		mg/L	

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	4	3.20	3.20
S	1.5	1-2	9	7.20	10.40
FG	3	2-4	8	6.40	16.80
FG	5	4-6	5	4.00	20.80
FG		6-8	7	5.60	26.40
MG	10	8-12	10	8.00	34.40
MG		12-16	14	11.20	45.60
CG		16-22	13		56.00
CG		22-32	15	12.00	68.00
CG	55.5	32-45	9	7.20	75.20
CG		45-64	12	9.60	84.80
SC		64-90	7	5.60	90.40
SC		90-128	6	4.80	95.20
MC		128-180	1	0.80	96.00
LC		180-256	1	0.80	96.80
LC		256-362	1	0.80	97.60
SB		362-512	3	2.40	100.00
MB	768	512-1024		0.00	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	125	100.00	100.00
		D50 particle size (mm)	16-22		
		% Fines (<2mm)	10.40		
	M12SFDBR04	2SFDBR04 Date- 6/17/2003 15:25			
	South Fork Dearborn, at Confluence with Dearborn River				





					Personnel: Landland (Bounna
Waterbody Name Figt	Fla	Flat Cree k	Location	County Louis + Clark	
Lat 17 - 19 47	7.0 y met	Long 113°33'00.3"	If Y wha	by map	me): NAD 27 NAD 83
Samples Taken:				Sample ID/Rile I const	-
Water	囚	Nutrients ⊠ Metals □ Commons □	□ suom	03.07.10	Sample Collection Procedure
Sediment					OKAB
Macroinvertebrate		Macroinvertebrate Habitat Asmt.	F		VICE HIER ASSESSED
Algae/Macrophytes		Aquatic Plant Form			#1
Chlorophyll a				THE PERSON OF THE PERSON	
Habitat Assessment		Stream Reach Asmr Corbor		STATE OF THE PROPERTY OF THE P	1
Substrate		Pebble Count @ Eine			Purpose: Try()/
Transect					
Photographs					
Field Notes					
Other					
Measurements:	Tin	Time: 20:30	Macroine	Married	
Q / Flow (cfs)		Fe J	Site Viet	Site Victor	Kick Length (Pt.):
Temp: (C)	×	*	- W		
pH:			Arm	dimpus upsteam of budge	4
SC: (mS/cm)					
SC x 1000 =		umbo/cm			
DO: (mg/L)					
TUR: Clear Slip	ght R	TUR: Clear Slight Turbid Opaque			
Turbidity Comments:		7.39			
			1	A C	
			1	The state of the s	

				Trip ID: SCU-2: DATE: CALLOS Personnel: La class Personnel: La cla
Waterbody Name Station ID	-0	Visit #	Location House County	HUC TOUSOLDS
Lat/Long obtained by	ny met	Long Long House State St	Lat Cong obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	Dire); NAD 27
Samples Taken:			Sumule ID/Gle I constant	1
Water	Ø	Nutrients Metals Commons		Sample Collection Procedure
Sediment				OKAB
Macroinvertebrute		Macroinvertebrate Habitat Asmt.		
Algae/Macrophytes		Aquatic Plant Form		
Chlorophyll a	×		03-8713/	PEKI-1 OTHER:
Habitat Assessment		Stream Reach Asmyt Chee		11:0
Substrate		Pebble Count S. Fines		Purpose: TOVO
Transect				
Photographs				
Field Notes				
Other				
Measurements:	Tin	Time: 9.15	Macroinvertabeata Kick Duraston	
Q / Flow (cfs)		Est	Site Visit Commantes	Nick Length (Pt.);
Temp: (C)	×		. comments	
pH:		100 PO		
SC: (mS/cm)		404		
SC x 1000 =		Ciq57 umbokem		
DO: (mg/L)	6	36.7% 8.95		
TUR: Clear Si	ight D	Slight M. Turbid Opaque		
Turbidity Comments:				
			A STATE OF THE STA	

	10-111-0-1	118/03	2 Month		: 03-0713 Station ID:	MIZFLATEON
	Personnel: La	dia lo	idmiso.			
	"Distance from initial point	**Depth	"Velocity (at point)	"Width	**Area	**Discharge
1	(O) /6	0	0			
2	18	5.8	0.05			
3	20	1.3	0.12			
4	22	1145	0.29			
5	24	1.5	0.49			
6	26	1.5	0.47			
7	28	1.5	0.54			
8	30	1.5	0.44			
9	32	1.5	0.54			
10	34	1.35	0.42			
11	26	1.35	0.53			
12	3.8	1.35	0.43			
13	40	1102	0,28			
14	42	105	0.30			
15	44	1,2	0.39			
16	46	1.9	0.32			72
17	48	1,35	0.35			
18	50	1.4	0.41			
19	52	11.5	0.29			
20	54	1.35	0 - 14			
21	56	1/3	0113			
22	58	lil.	0.12			
23	60	1.0.5	0.05			
24	62	3.6	0.0/		-	
15	64	6	0			
6						
7						
8						
9						
00						

Date:	6-18-03				Site Vi	sit Code	03-67	13
Waterboo	ly: Flat City	k-	At Mouth	S	TORETS	tation ID:	MiziFlat	Co4
Personne	1: Ladlan	130	WAYER					
		7		EBBLE CO	UNT			
Row ID	Particle Catego	ory	Size (mm)	Riffle Count	(Other) Count	Chara	cteristic Grou	p: PEBL-CNT
						Sum	% of Total	Cum. Total
1	Silt / Clay		<1	110		0		0.00%
2	Sand		1-2			0	10	0.00%
3	Very Fine		2-4	,Ott jar i		0		0.00%
4	Fine		4-6	ant 104.3//		0		0.00%
5	Fine		6-8	1		0		0.00%
6	Medium	rs	8 - 12	GIF IA		0		0.00%
7	Medium	GRAVELS	12 - 16			0		0.00%
8	Coarse	9	16 - 22	1		0		0.00%
9	Coarse	3	22 - 32	pa		0		0.00%
10	Very Coarse	-	32 - 45	JPH II		0		0.00%
11	Very Coarse		45 - 64	154 154 F		0		0.00%
12	Small		64 - 90	JHF.		0		0.00%
13	Small	COBBLES	90 - 128	itt		0		0.00%
14	Large	COB	128 - 180	MIT		0		0.00%
15	Large		180 - 256	105		0		0.00%
16	Small		256 - 362	140		0		0.00%
17	Small	RS	362 - 512			0		0.00%
18	Medium	BOULDERS	512 - 1024	ch .		0		0.00%
19	Large	B	1024 - 2048	W		0		0.00%
20	Bedrock		> 2048	ERE Detroit		0		0.00%
21	Total # Samples			17/4 L 0	0	0	0.00%	

Station ID:	SFIOT COT	Date:	0-18-03	Site Visit Code:	00-0710	
Waterbody:	lat Crein	At Mouth		Reach Length:		
Waterbody Seg ID:			Personnel:			
Station ID's on reac	h:					
Question 1, Stream	Incisement:					
3 = channel stable, the incised channel.	no active downce There is perenn	utting occurring; old dov ial riparian vegetation v	vill established if	n the riparian area.	(Stage 1 and 5, 3	SCHUMINTS
he falling bands, so	ăid disturbance e	ncutting that has begur vident. (Stage 4).				
small headcut, in	n early stage, is p	present. Immediate act	ion may prevent	t further degradatio	n (early Stage 2)	
e unstable, channe	el Incised, active esent is mainly p	ly widening, limited new ioneer species. Bank f	riparian area/flo ailure is commo	oodplain, floodplain n. (Stage 3)	not well vegetat	ed. The
or rare flood events	access the flood	ng a gully, little or no rip plain. Tributaries will a	ilso exhibit dowr	ncutting/neadcuts.	(Stage 2)	Only occasional
The presence of act	ive headcuts sho	ould nearly always keep	the stream rea	ch from being rated	d sustainable.	
Actual Score:	_8	Potential Score: _	8			
Comments						
	nt of Streamban	ks with Active Lateral	l Cutting:			
Question 2, Percer		ks with Active Lateral		*		
Question 2, Percer	erosion is in bala		d its setting	ŕ		Ä
Question 2, Perceis = the lateral bank of the	erosion is in bala al amount of activ	nce with the stream an	d its setting occurring			*
Question 2, Percer 5 = the lateral bank of 1 = there is a minimal 2 = there is a moder	erosion is in bala al amount of activ ate amount of ac	nce with the stream and we lateral bank erosion tive lateral bank erosion osion occurring	d its setting occurring n occurring			*
Question 2, Percei 5 = the lateral bank of the there is a minimal	erosion is in bala al amount of activ ate amount of ac	nce with the stream and we lateral bank erosion tive lateral bank erosion	d its setting occurring n occurring			
Question 2, Percei 5 = the lateral bank of 1 = there is a minima? = there is a moden 2 = there is excessiv Actual Score:	erosion is in bala al amount of activ ate amount of ac	nce with the stream and we lateral bank erosion tive lateral bank erosion osion occurring	d its setting occurring n occurring			
Question 2, Percer 5 = the lateral bank of 4 = there is a minima 2 = there is a moder 0 = there is excessive Actual Score: Comments Duestion 3, The Str	erosion is in bala al amount of activate amount of ac re lateral bank en	nce with the stream and ve lateral bank erosion objective lateral bank erosion osion occurring Potential Score:	d its setting occurring in occurring	ng Supplied by th	ne Watershed:	
e there is a minimal there is a modern there is a modern there is a constituted Score: comments cuestion 3, The Stream exhibs specied in a stable,	erosion is in bala al amount of activate amount of ac re lateral bank en	nce with the stream and we lateral bank erosion obtive lateral bank erosion osion occurring Potential Score:	d its setting occurring in occurring in occurring in occurring is setting in	ng Supplied by th	and other location	ons as would be
tuestion 2, Perceit the lateral bank of there is a minimal there is a modern there is excessive the excessive there is excessive the excessive the excessive the excessive the excessive there is excessive the ex	erosion is in bala al amount of activate amount of ac re lateral bank en	nce with the stream and ve lateral bank erosion obtained bank erosion osion occurring Potential Score;	d its setting occurring in occurring in occurring in occurring is setting in	ng Supplied by th	and other location	ons as would be
e there is a minimal of there is a moder. I there is a moder. I there is a moder. I there is excessive the excessive there is excessive there is excessive the excessive the excessive the excessive there is excessive the excessive there is excessive the exces	erosion is in bala al amount of activate amount of ac- re lateral bank en ream is in Balan its no excess sec, dynamic system d gravel's are apples are common	nce with the stream and the lateral bank erosion osion occurring Potential Score:	d its setting occurring in occurring in occurring in occurring in occurring its setting	ng Supplied by th ccurs on point bars nce of excess sedi	and other location	ons as would be
ethere is a minimal ethere is a moder. ethere is a moder. ethere is a moder. ethere is excessive. cual Score: comments euestion 3, The Street ethe stream exhibit expected in a stable, esediment clogger.	erosion is in bala al amount of activate amount of ac- re lateral bank en ream is in Balan its no excess sec, dynamic system d gravel's are apples are common	nce with the stream and we lateral bank erosion of the lateral bank erosion osion occurring Potential Score:	d its setting occurring in occurring in occurring in Sediment Bei iton, sediment occurring, or other evidentems), having a	ng Supplied by th ccurs on point bars nce of excess sedi	and other location	ons as would be
Question 2, Percer 5 = the lateral bank of a there is a minimal 2 = there is a moder 0 = there is excessive cutual Score: Comments Question 3, The Str 5 = the stream exhibits a stable, a sediment clogger a mid-channel bars	erosion is in bala al amount of activate amount of ac- re lateral bank en ream is in Balan its no excess sec dynamic system d gravel's are app s are common d (except natural)	nce with the stream and the lateral bank erosion oscion occurring Potential Score: Ince with the Water and diment/bedload deposite parent in riffles or pools by occurring braided systems.	d its setting occurring in occurring in occurring in occurring its setting in occurring its setting in occurring its setting in occurring its setting	ng Supplied by th ccurs on point bars nce of excess sedi It least 3 active cha	and other location ment apparent innels	ons as would be
Question 2, Percer 5 = the lateral bank of a there is a minimal 2 = there is a moder. 9 = there is excessive citual Score: Comments Question 3, The Strip a the stream exhibits a sediment clogger a stream is braided a stream is braided	erosion is in bala al amount of activate amount of ac- re lateral bank en ream is in Balan its no excess sec dynamic system d gravel's are app s are common d (except natural)	nce with the stream and we lateral bank erosion of the lateral bank erosion osion occurring Potential Score:	d its setting occurring in occurring in occurring in occurring its setting in occurring its setting in occurring its setting in occurring its setting	ng Supplied by th ccurs on point bars nce of excess sedi It least 3 active cha	and other location ment apparent innels	ons as would be

Question 4, Suffic	eient Soil Present to Hold Water and Act as a Rooting Medium:
3 = more than 85%	of the riparian area with sufficient soil to hold water and act as a rooting medium
2 = 65% to 85% of	the riparian area with sufficient soil to hold water and act as a rooting medium
1 = 35% to 65% of	the riparian area with sufficient soil to hold water and act as a rooting medium
0 = 35% or less of t	the riparian area with sufficient soil to hold water and act as a rooting medium
Actual Score:	2 Potential Score: 2
	jard vocte
Comments	
Question 5, Perce ratings for mot t ri	ent of Streambank with Vegetation having a Deep, Binding Rootmass: (see Appendix I for stability parian, and other, species)
6 = more than 80%	of the streambank comprised of plant species with deep, binding root masses
4 = 60% to 80% of t	the streambank comprised of plant species with deep, binding root masses
2 = 30% to 60% of t	he streambank comprised of plant species with deep binding root masses
0 = less than 30% o	f the streambank comprised of plant species with deep binding root masses
Actual Score:	
Comments	
Question 6, Weeds	
3 = No noxious week	
	rian area has noxious weeds
	arian area has noxious weeds
) = over 5% of the ri	parian area has noxious weeds
Actual Score:	Potential Score:
Comments	
Question 7, Disturb	eance-Caused Undesirable Plants:
= 1% or less of the	riparian area has undesirable plants
= 1%-5% of the rips	arian area has undesirable plants
= 5%-10% of the rig	parian area has undesirable plants
aver 100/ of the 1	riparian area has undesirable plants
m over 10% or me i	Potential Score: 3
actual Score:	

potential for woody s		earian species present (see table, Fig 2)
		arian species clearly absent, all others well represented. For sites with potential for trees
and shrubs, there m mature individuals a	ay be one age clas nd a young age cla	ss of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having ass present indicate potential for recovery.
or the stand is comp	rised of mainly ma	shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented, sture, decadent or dead plants
dominate. Re-evalu	ate Question 1, inc	ve, facultative upland species such as rose, or snowberry) or non-riparian species cisement, if this has happened.
0 = some woody spe evaluated to ensure cedar	that it has potentia	% cover), but herbaceous species dominate (at this point, the site potential should be re- al for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt
Actual Score:	_6_	Potential Score: 6
Comments		
		The second secon
Question 9, Utiliza species)	tion of Trees and	Shrubs: (Note: Skip this question if the riparian area has no potential for woody
4 = 0-5% of the avail	able second year a	and older stems are browsed
3 = 5%-25% of the a	vailable second ye	par and older stems are browsed
2 = 25%-50% of the	available second y	year and older stems are browsed.
growth form, or they	are high-lined or ur	
0 = there is noticeab	e use (10% or mor	re) of unpalatable and normally unused woody species.
Actual Score:	4	Potential Score: 4
votual Score.		
Comments		
Question 10 Dinor	an/Wetland Vege	etative Cover in the Riparian Area/Floodplain and Streambank:
		d plant cover has a stability rating ≥ 6
		ant cover has a stability rating ≥ 6
		ant cover has a stability rating ≥ 6
= 55%-65% of the		ant cover has a stability rating ≥ 6
		nd plant cover has a stability rating ≥ 6
= less than 55% of	9,	Potential Score:
e less than 55% of actual Score:		
Actual Score:		

Question 11,111	arian Area/Floodplain Character	18			
adiment There	r overflow channels, large rock, or is little surface erosion and no evid re are no headcuts where either or	lence of long, continuous	s erosional area	s on floodplain/ripar	ian area or
4 - rock and/or w	oody material is present, but gener lonal evidence of surface erosion.	ally of insufficient size to	dissipate energ	y. Some sediment	
a – inadequate ro	ck and/or woody material available casional headcuts where overland	for dissipation of energy	y or sediment tra	apping. There is su	face erosion
0 = riparian area/f material suitable f substrate material	loodplain lacking any of these attri or energy dissipation and sedimen is adequate to resist further erosion the potential to create meander cu	outes: 1)adequate flood t trapping. Erosional are n. Surface erosion is ob	or overflow cha	nnels, 2) large rock continuous. Lackin	ng vegetation
Actual Score:	Potential S	score: 6			
Comments					
	-	a			
		SUMMARY			
				Describle Delete	Potential
			Actual Score 0	Possible Points 0, 2, 4, 6, 8	Score 0
DUESTION 1:	Stream Incisement Lateral Cutting		0	0, 2, 4, 6	0
UESTION 2:	Stream Balance		0	0, 2, 4, 6	0
UESTION 3:	Sufficient Soil		0	N/A, 0, 1, 2, 3	0
DUESTION 4:			0	N/A, 0, 2, 4, 6	0
DUESTION 5:	Rootmass		0	0, 1, 2, 3	0
UESTION 6:	Weeds		0	0, 1, 2, 3	0
UESTION 7:	Undesirable Plants				0
UESTION 8:	Woody Species Establishment		0	N/A, 0, 2, 4, 6, 8	
UESTION 9:	Browse Utilization		0	N/A, 0, 1, 2, 3, 4	0
UESTION 10:	Riparian/Wetland Vegetative C		0	N/A, 0, 2, 4, 6, 8	0
UESTION 11:	Riparian Area/Floodplain Chara	acteristics *	0	N/A, 0, 2, 4, 6	0
		Total	0	61	0
otential Score for	most Bedrock or Boulder streams (questions 1, 2, 3, 6, 7, 11)		0	(32)	0
otential Score for	most low energy "E" streams (questions 1 – 7, 10, 11)		0	(49)	0
ATING: =	Actual Score Potential Sco	X 100 = % rating ore	#DIV/01		
	80-100% = SUSTAINABLE 50-80% = AT RISK LESS THAN 50% = NOT SUST	AINABLE			
Only in certain, sp	pecific situations can both of these	receive an "N/A".			
					SRAF.xts

Adult and Juvenile Holding/Escape Cover a Abundant deep pools, woody debris, overhanging vegetation, boulders, root wads, undercut banks and/or aquatic b Fish habitat is common (see above). Fish habitat is noticeably reduced. Most pools are shallow and/or woody debris, undercut banks, overhanging vegetation obulders, root wads and/or aquatic vegetation are of limited supply. Pools and habitat features are sparse or non-existent or there are fish barriers. There is not enough water to support a fishery Fig. 1. There is not enough water to support a fishery Fig. 2. Potential Score: Potential Score: Potential Score: Potential Score: Primarily adult or juvenile and adult cover types is present. High flow juvenile and adult refugia are present. Figh flow refugia are lacking. Fig. 2. Habitat Complexity Fig. 3. A mixture of juvenile cover types are present. High flow refugia are reduced. Figh flow refugia are lacking. Fig. 4. A stream would not support fish under natural conditions Fig. 5. Potential Score:			artment of Environmental Quality Supplemental Questions	
8 = Abundant deep pools, woody debris, overhanging vegetation, boulders, root wads, undercut banks and/or aquatic 6 = Fish habitat is noticeably reduced. Most pools are shallow and/or woody debris, undercut banks, overhanging vegetation boulders, root wads and/or aquatic vegetation are of limited supply. 2 = Pools and habitat features are sparse or non-existent or there are fish barriers. 0 = There is not enough water to support a fishery N/A = Stream would not support fish under natural conditions Actual Score: Potential Score: Potential Score: Comments 12b. Habitat Complexity 5 = A misture of juvenile and adult cover types is present. High flow juvenile and adult refugia are present. 3 = Primarily adult or juvenile cover types are present. High flow refugia are reduced. 2 = High flow refugia are lacking. N/A = Stream would not support fish under natural conditions Actual Score: Potential Score: Comments 12c. Spawning Habitat (salmonid streams only) 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 2 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 3 = Areal extent of spawning substrate. 3 = Areal extent of spawning substrate. 3 = Areal ext	The score for these Note: Answers to the	e questions does n nese questions mu	not have an effect on the rating above. sst consider the potential of the stream.	
2 = Pools and habitat features are sparse or non-existent or there are fish barriers. 0 = There is not enough water to support a fishery N/A = Stream would not support fish under natural conditions Actual Score: Potential Score: Comments 12b. Habitat Complexity 6 = A mixture of juvenile and adult cover types is present. High flow juvenile and adult refugia are present. 3 = Primarily adult or juvenile cover types are present. High flow refugia are reduced. 0 = High flow refugia are lacking. N/A = Stream would not support fish under natural conditions Actual Score: Potential Score: Comments 12c. Spawning Habitat (salmonid streams only) 3 = Areal extent of spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. 4 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 0 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. N/A = Stream would not support fish under natural conditions. N/A = Stream would not support fish under natural conditions. Potential Score: Potential Score: Potential Score: Potential Score:	Question 12. Fish	eries Habitat / St	tream Complexity Note: the answers to question 12 will be averaged	
4 = Fish habitat is noticeably reduced. Most pools are shallow and/or woody debris, undercut banks, overhanging vegetation boulders, root wads and/or aquatic vegetation are of limited supply. 2 = Pools and habitat features are sparse or non-existent or there are fish barriers. 0 = There is not enough water to support a fishery N/A = Stream would not support fish under natural conditions Actual Score: Potential Score: Potential Score: Potential Score: Comments 12b. Habitat Complexity 6 = A mixture of juvenile and adult cover types are present. High flow juvenile and adult refugia are present. 3 = Primarily adult or juvenile cover types are present. High flow refugia are reduced. 0 = High flow refugia are lacking. N/A = Stream would not support fish under natural conditions Actual Score: Potential Score: Comments 12c. Spawning Habitat (salmonid streams only) 3 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. 1 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 1/A = Stream would not support fish under natural conditions. 1/A = Stream would not support fish under natural conditions. 1/A = Stream would not support fish under natural conditions. 1/A = Stream would not support fish under natural conditions. 1/A = Stream would not support fish under natural conditions.	12a. Adult and Ju 8 = Abundant deep	venile Holding/Es pools, woody deb	scape Cover oris, overhanging vegetation, boulders, root wads, undercut banks and/or	aquatic
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12c. Spawning Habitat (salmonid streams only) 8 = Areal extent of spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent. 4 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. 5 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 6 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 6 = Areal extent of spawning substrate are excellent. 7 = Areal extent of spawning substrate are excellent. 8 = Areal extent of spawning substrate are excellent. 9 = Areal extent of spawning substrate are excellent. 9 = Areal extent of spawning substrate are excellent. 9 = Areal extent of spawning substrate are excellent. 9 = Areal extent of spawning substrate are excellent. 9 = Areal extent of spawning substrate. 9 = Areal extent				
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B = Areal extent of spawning substrate, morphology of spawning areas, and composition of spawning substrate are excellent 4 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate reduced. 5 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 6 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 6 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 7 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 8 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate greatly reduced. 9 = Areal extent of spawning substrate grea	Actual Score: Comments	_6_	Potential Score:	
D = Areal extent of spawning substrate, morphology of spawning areas, and/or quality of spawning substrate greatly reduced. N/A = Stream would not support fish under natural conditions. Actual Score: Potential Score:	Comments			
N/A = Stream would not support fish under natural conditions. Actual Score: Potential Score: Potential Score:	Comments 12c. Spawning Ha 8 = Areal extent of s	pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate a	
Actual Score: NA Potential Score:	Comments 12c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s	pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate a a, morphology of spawning areas, and/or quality of spawning substrate redu	iced.
	Comments 12c. Spawning Ha 8 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate a b, morphology of spawning areas, and/or quality of spawning substrate redu b, morphology of spawning areas, and/or quality of spawning substrate grea	iced.
Comments	Comments 12c. Spawning Ha 8 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate a b, morphology of spawning areas, and/or quality of spawning substrate redu b, morphology of spawning areas, and/or quality of spawning substrate grea	iced.
	Comments 12c. Spawning Ha 8 = Areal extent of s 4 = Areal extent of s O = Areal extent of s V/A = Stream would	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s N/A = Stream would Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 8 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s N/A = Stream would Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s 9 = Areal extent of s 1/A = Stream would 1/Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s 9 = Areal extent of s 1/A = Stream would 1/Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s N/A = Stream would Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 8 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s N/A = Stream would Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 8 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s N/A = Stream would Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.
	Comments 12c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s 0 = Areal extent of s N/A = Stream would Actual Score:	pawning substrate pawning substrate pawning substrate	treams only) a, morphology of spawning areas, and composition of spawning substrate as morphology of spawning areas, and/or quality of spawning substrate reduct, morphology of spawning areas, and/or quality of spawning substrate greater natural conditions.	iced.

12d. Fish Passsi 8 = No potential fis	age sh passage barriers a	pparent.	
0 = Potential fish p	assage barriers pres	ent.	
N/A = Stream wou	ld not support fish un	der natural conditions.	
Actual Score:	- 6	Potential Score:	
Comments			
12e. Entrainment 8 = Entrainment of	fish into water diversi	ions not an issue.	
4 = Entrainment of	fish into water diversi	ions may be a moderate issue.	
		ions may be a major issue.	
Actual Score:	- 8	Potential Score:	
Comments		-	
12a-e Avg. Score	Actual Score	0 Potential Score	0
Overtion 13 Sol	er Radiation		-6
Question 13, 304	ii nadiation	a adequately shaded by yongtation	+0/109/Ugo 44
	of the stream reach i		
6 = More than 75%	of the stream reach	s adequately shaded by vegetation.	emperature is probably elevated by irrigation.
4 = 50-75% of the 8	stream reach does no	t usas adednate surround of me water to	emperature is probably elevated by irrigation,
4 = 50-75% of the $3 = Approximately 3$	stream reach does no 25-50% of the stream	does not have adequate shade.	implifiable is proceedly deviated by angularity
4 = 50-75% of the s 3 = Approximately 3 0 = More than 75%	stream reach does no 25-50% of the stream of the stream reach o	does not have adequate shade.	emperature is probably elevated by irrigation, ation or the water temperature is probably
4 = 50-75% of the $3 = Approximately 3$	stream reach does no 25-50% of the stream of the stream reach o	does not have adequate shade.	implifiable is proceedly deviated by angularity
4 = 50-75% of the a 3 = Approximately and 0 = More than 75% drastically altered b	of the stream reach of the stream of the stream reach of the strea	does not have adequate shade.	implifiable is proceedly dioretics by angularity
4 = 50-75% of the s 3 = Approximately; 0 = More than 75% drastically altered b Actual Score:	of the stream reach of the stream of the stream reach of the strea	does not have adequate shade.	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately: 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga	e growth / Nutrients	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately; 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga 5 = Algae not appar	e growth / Nutrients	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately; 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga 3 = Algae not appar	e growth / Nutrients	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately i 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga 3 = Algae not appar 4 = in small patches 2 = in large patches	e growth / Nutrients ent. Rocks are slippe or along channel ed or discontinuous mal	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately i 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga 3 = Algae not appar 4 = in small patches 2 = in large patches	e growth / Nutrients ent. Rocks are slippe or along channel ed or discontinuous mal	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately i 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga 3 = Algae not appar 4 = in small patches 2 = in large patches	e growth / Nutrients ent. Rocks are slippe or along channel ed or discontinuous mal	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately; 0 = More than 75% drastically altered b Actual Score; Comments Question 14. Alga 3 = Algae not appar 4 = in small patches 2 = in large patches 0 = Mats cover botto VA = No water	e growth / Nutrients ent. Rocks are slippe or along channel ed or discontinuous mal	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately; 0 = More than 75% drastically altered b Actual Score; Comments Question 14. Alga 5 = Algae not appar 4 = in small patches 2 = in large patches 0 = Mats cover botto N/A = No water	e growth / Nutrients ent. Rocks are slippe or along channel edg or discontinuous mal	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately; 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga 3 = Algae not appar 4 = in small patches 2 = in large patches 0 = Mats cover botto	e growth / Nutrients ent. Rocks are slippe or along channel edg or discontinuous mal	does not have adequate shade. does not have adequate shade by veget Potential Score: fy. ge ts poditions) or plants not apparent and roc	ation or the water temperature is probably
4 = 50-75% of the s 3 = Approximately; 0 = More than 75% drastically altered b Actual Score: Comments Question 14. Alga 3 = Algae not appar 4 = in small patches 2 = in large patches 0 = Mats cover botto N/A = No water Actual Score:	e growth / Nutrients ent. Rocks are slippe or along channel edg or discontinuous mal	does not have adequate shade. does not have adequate shade by veget Potential Score:	ation or the water temperature is probably

Question 15. Su	rface oils, turbid	fity, salinization, precipitants on stream botto	om and/or water odor
6 = none			
4 = Slight			
2 = Moderate			
0 = Extensive			
N/A = No water			
	6	Potential Score: 6	
Actual Score:	- 10	Potential Scote.	
Comments	-		
Comments	-		
	to de		
Question 16. Bac 4 = There are no k		nic sources of bacteria	
		esent. Wastewater or concentrated livestock op	perations are the most common sources.
		wage is entering the stream	
Actual Score:	NA	Potential Score:	
Actual Score.			
Comments			
o o i i i i i i i i i i i i i i i i i i			
Question 17. Ma		Ctronm	effice usually have an abundance of ma
Question 17. Ma	s a healthy and div	verse community of macroinvertebrates. Stream	riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar	s a healthy and div nd/or stone flies.	verse community of macroinvertebrates. Stream	niffles usually have an abundance of ma
Question 17. Ma 4 = The stream had lies, caddis flies ar 2 = The stream is c	s a healthy and div nd/or stone flies.	tion tolerant taxa such as fly and midge larva.	riffles usually have an abundance of ma
Question 17. Ma 4 = The stream had lies, caddis flies ar 2 = The stream is c	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab	tion tolerant taxa such as fly and midge larva.	niffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is c 3 = Macroinvertebr WA = Stream reach	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	riffles usually have an abundance of ma
Question 17. Ma 4 = The stream had lies, caddis flies at 2 = The stream is compared to the strea	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab	tion tolerant taxa such as fly and midge larva.	niffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	niffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is c 3 = Macroinvertebr WA = Stream reach	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	n riffles usually have an abundance of ma
Question 17. Ma 4 = The stream has lies, caddis flies ar 2 = The stream is of 0 = Macroinvertebro WA = Stream react Actual Score:	s a healthy and div nd/or stone flies. dominated by pollu ates are rare or ab h is ephemeral	ation tolerant taxa such as fly and midge larva.	a riffles usually have an abundance of ma

Question 18. Irrig Evaluate effects from	ation impacts (Asse m de-watering or inte	as during critical low flow probasin transfer of water.)	eriods or you may need to	inquire locally abo	out this.
	oticeable impacts from				
organisms.		on practices are noticeable			uatic
4 = Flows support	quatic organisms, bu	habitat, especially riffles a	re drastically reduced or in	npacted.	
2 = The flow is low	enough to severely im	pair aquatic organisms			
0 = All of the water	has been diverted from	n the stream			
N/A = Stream reach	is ephemeral.				
Actual Score:	_6	Potential Score: 8	1 0 1 6	and A	
Comments	ings	m return	6 25m65 12		
Question 19. Lane	luse activities – Sou	rces		DOS SANDONES	2012 100 000 1
appear to be natura		gnificantly impact water qu			
6 = There are some timber harvesting, u	signs of impact from rban, roads, etc.	landuse activities such as	grazing, dryland agricultur	e, irrigation, feedlo	ts, mining,
4 = Impacts from la obvious signs of hu	nduse activities are ob nan induced erosion,	vious and occur throughou saline seeps or overgrazin	it most of the stream reac g within the watershed.	h. For example, th	ere are
obvious signs of hu 2 = Landuse impact overwhelming evide	nan induced erosion, s are significant and w nce that the stream is	saline seeps or overgrazin idespread. Visual observa impaired.	g within the watershed.	ation would provide	,
obvious signs of hu 2 = Landuse impact overwhelming evide 0 = Land use impac	nan induced erosion, s are significant and w nce that the stream is	saline seeps or overgrazin idespread. Visual observa impaired. the stream has lost most	g within the watershed.	ation would provide	,
obvious signs of hu 2 = Landuse impact overwhelming evide 0 = Land use impac	nan induced erosion, is are significant and w noe that the stream is are so intrusive that nost forms of aquatic	saline seeps or overgrazin idespread. Visual observa impaired. the stream has lost most	g within the watershed.	ation would provide	,
obvious signs of hu 2 = Landuse impact overwhelming evide 0 = Land use impac capable to support r Actual Score:	nan induced erosion, is are significant and w noe that the stream is are so intrusive that nost forms of aquatic	saline seeps or overgrazin idespread. Visual observa impaired. the stream has lost most ife	g within the watershed.	ation would provide	,
obvious signs of hu 2 = Landuse impact overwhelming evide 0 = Land use impac capable to support r Actual Score: Comments	nan induced erosion, is are significant and wince that the stream is is are so intrusive that nost forms of aquatic	saline seeps or overgrazin idespread. Visual observa impaired. the stream has lost most ife	g within the watershed. ation and photo document of its natural features. Th	ation would provide	,
obvious signs of hu 2 = Landuse impact overwhelming evide 0 = Land use impact capable to support r Actual Score: Comments	nan induced erosion, s are significant and w noe that the stream is ts are so intrusive that nost forms of aquatic	saline seeps or overgrazin idespread. Visual observa impaired. the stream has lost most life Potential Score:	g within the watershed. ation and photo document of its natural features. Th	ation would provide	,
obvious signs of hu 2 = Landuse impact overwhelming evide 0 = Land use impact capable to support r Actual Score: Comments Total Actual RATING	nan induced erosion, s are significant and w noe that the stream is ts are so intrusive that nost forms of aquatic O Total x Potential	saline seeps or overgrazin idespread. Visual observa impaired. the stream has lost most ife Potential Score: Total Potential 0	g within the watershed. ation and photo document of its natural features. Th	ation would provide	,
obvious signs of hu 2 = Landuse impact overwhelming evide 0 = Land use impact capable to support r	nan induced erosion, s are significant and w noe that the stream is ts are so intrusive that nost forms of aquatic O Total x Potential	saline seeps or overgrazin idespread. Visual observations and the stream has lost most life. Potential Score: Total Potential 0 #DIV I NRCS Actual + Total MT I NRCS Potential + Total M	g within the watershed. ation and photo document of its natural features. Th	ation would provide	appear to be

Waterbody Name		Pen	Personnel: Cardlows Bountan
69	Visit#	Location County to 25.5 4 Classe HUG	HUC /0030103
Lat/Long obtained by me	Long S S S S S S S S S	Lat Long Long Long Verified? By GPS Datum (Circle One): NAD 27 Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	One): NAD 27 NAD 83 WGS84
Samples Taken:		Samule ID/Ella I acaston.	1
Water	Nutrients Metals Commons		Sample Collection Procedure
Sediment			Gran i
Macroinvertebrate	Macroinvertebrate Habitat Asnut.		VIVY URSE COMME
Algae/Macrophytes			DEDI 1 COUNTY.
Chlorophyll a		DALPTING LATE I WITE !	of the sum
Habitat Assessment	Stream Reach Asmt. Other	The section of	CRLPHL-Z OTHER:
Substrate	Petbble Count S % Fines		Purpose:
Transect	-		
Photographs			
Field Notes			
Other			
Measurements: Th	Time 7 80	Macroinvertabrate Kiel Durasione	The second secon
	Ea	Site Viet Comments	Kick Length (FL):
Temp: (C) W	21,76 A	Sir Comments:	
pH:	C C C		
SC: (mS/cm)	.240		
SC x 1000 =	mp/o/cm		
DO: (mg/L)	9.06 108.L'12		
TUR: Clear Slight	Turbid O		
Turbidity Comments:	Midily		

1			a Milford C	dony	Station I	D: MIDITIAL COS
1	Personnel:	a dlaw 18	Navaux			
I	"Distance from initial point	"Depth	"Velocity (at point)	· Width	"Area	**Discharge
1	LOW 150 1514 H	1.28 4	0,70			
2	16.5	122	1.91			
3	17,5	1:12	1,77			
4	18.5	1,00	2.11			
5	19.5	0.95	2:15			
6	20.5	0.95	2.06			
7	21.5	1.05	2.17			
8	22.5	109	2.01			
9	23.5	0.95	1.82			
10	24.5	0.90	2116			
11	25.5	0.87	2.30			
12	26.6	0.85	5110			
13	27.5	0.90	2.14			
14	28.5	0.78	2:06			
15	29.5	0.65	2.00			-
16	730,5	0.65	2.04			
17	36.5	0,60	1.89			
8	32.5	0.62	0.36			
9	13.5	0.20	-0.0			
0						
1						-
2						_
3						
4						
5						
6						
7	71					
8						
9						
0						

LIDCTDATE	DECAMBLE	

Revised 3/2003 DMA

Pebble Count Data Entry Form

Date: 4-18-03 Site Visit Code: 03-0715

Waterbody: Flat Crack D/s Milland Cobe STORET Station ID: MIR Flat COS

Personnel: Landlaw Bowman

			PI	EBBLE CO	TAUC	-		
Row ID	Particle Categ	jory	Size (mm)	Riffle Count	(Other) Count	Chara	cteristic Grou	p: PEBL-CNT
		T				Sum	% of Total	Cum, Total
1	Silt / Clay		<1	HT HI		0		0.00
2	Sand		1-2			0		0.00
3	Very Fine		2-4	11		0		0.00
4	Fine		4-6	1/4		0		0.00
5	Fine	-	6-8			0		0.00
6	Medium	0	8-12	11 財 別		0		0.00
7	Medium	GRAVELS	12 - 16			0		0.00
8	Coarse	9	16 - 22	THE THE		0		0.00
9	Coarse		22 - 32	は代 2円 3才 19版 N		0		0.00
10	Very Coarse	- 3	32 - 45	SET SHE SET 111 130: SIA		0		0.00
11	Very Coarse	-	45 - 64			0		0.00
12	Small		64 - 90	n that		0		0.009
13	Small	COBBLES	90 - 128	11		0		0.00
14	Large	_ 8	128 - 180	/		0		0.009
15	Large		180 - 256			0		0.009
16	Small		256 - 362			0		0.009
17	Small	ERS	362 - 512			0		0.009
18	Medium	BOULDERS	512 - 1024			0		0.009
19	Large	B6	1024 - 2048			0		0.009
20	Bedrock		> 2048			0		0.009
21	Total # Samples	10		0	0	0	0.00%	

		374742 0010 1020000000	Assessment Form
Station ID: _	miatia+Co5	Date:	8/43 Site Visit Code: 03-07/5
Waterbody:	Flat Cok		Reach Length:
Waterbody S	leg ID:		Personnel:
Station ID's o	on reach:		
Question 1,	Stream Incisement:		
3 = channel s he incised ch nodel)	stable, no active downco hannel. There is perenn	utting occurring; old downer ial riparian vegetation will e	utting apparent but a new, stable riparian area has formed with established in the riparian area. (Stage 1 and 5, Schumm's
	nas evidence of old dow nds, solid disturbance e		abilizing, vegetation is beginning to establish, even at the base
= small hea	dcut, in early stage, is p	resent. Immediate action	may prevent further degradation (early Stage 2).
egetation the	channel incised, activel at is present is mainly p	y widening, limited new rip oneer species. Bank failur	arian area/floodplain, floodplain not well vegetated. The e is common. (Stage 3)
= channel d or rare flood e	leepty incised, resembling the second in the	ng a gully, little or no riparia plain. Tributaries will also	n area, active downcutting is clearly occurring. Only occasions exhibit downcutting/headcuts. (Stage 2)
The presence	of active headcuts sho	uld nearly always keep the	stream reach from being rated sustainable.
ctual Score:	4	Potential Score:	8
Comments	lahaal	wash out	de banks outling
uestion 2.	Percent of Streambani	ks with Active Lateral Cu	tting:
		nce with the stream and its	
= there is a	minimal amount of activ	e lateral bank erosion occu	urring
= there is a	moderate amount of act	ive lateral bank erosion oc	curring
= there is ex	cessive lateral bank ero	sion occurring	*
ctual Score:	3	Potential Score:	0
omments	50010	enders.	
			diment Being Supplied by the Watershed:
	exhibits no excess sed stable, dynamic system	iment/bedload deposition,	sediment occurs on point bars and other locations as would be
sediment c	logged gravel's are app	arent in riffles or pools, or	other evidence of excess sediment apparent
mid-channe	el bars are common		
stream is b	raided (except naturally		s), having at least 3 active channels
tual Score:	3	Potential Score:	6

	ent Soil Present to Hold Water and Act as a Rooting Medium:
	of the riparian area with sufficient soil to hold water and act as a rooting medium
	he riparian area with sufficient soil to hold water and act as a rooting medium
	he riparian area with sufficient soil to hold water and act as a rooting medium
0 = 35% or less of the	ne riparian area with sufficient soil to hold water and act as a rooting medium
Actual Score:	3 Potential Score;3
Comments	
ratings for most rip	nt of Streambank with Vegetation having a Deep, Binding Rootmass: (see Appendix I for stability parian, and other, species)
6 = more than 80%	of the streambank comprised of plant species with deep, binding root masses
4 = 60% to 80% of the	ne streambank comprised of plant species with deep, binding root masses
2 = 30% to 60% of the	ne streambank comprised of plant species with deep binding root masses
0 = less than 30% of	the streambank comprised of plant species with deep binding root masses
Actual Score:	Potential Score: 6
Comments	
Question 6, Weeds 3 = No noxious week	
	ian area has noxious weeds
	arian area has noxious weeds
	parian area has noxíous weeds
Actual Score:	
Comments	*
Question 7, Disturb	ance-Caused Undesirable Plants:
Question 7, Disturb	riparian area has undesirable plants
Question 7, Disturb 3 = 1% or less of the 2 = 1%-5% of the rips	riparian area has undesirable plants arian area has undesirable plants
Question 7, Disturb 3 = 1% or less of the 2 = 1%-5% of the ripo = 5%-10% of the rip	riparian area has undesirable plants arian area has undesirable plants parian area has undesirable plants
Question 7, Disturb 3 = 1% or less of the 2 = 1%-5% of the ripo = 5%-10% of the rip	riparian area has undesirable plants arian area has undesirable plants
Question 7, Disturb 3 = 1% or less of the 2 = 1%-5% of the ripo 1 = 5%-10% of the ripo	riparian area has undesirable plants arian area has undesirable plants parian area has undesirable plants

Question 8, Woody Species Establishment and Regeneration: (Note: Skip this question if the riparian area has no potential for woody species) 8 = all age classes of native woody riparian species present (see table, Fig 2) 6 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for trees and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented, or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (fe., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re-evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt codar. Actual Score: ② Potential Score: ⑤ Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species and shall be second year and older stems are browsed. 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 3 = 1 = more than 50% of the available second year and older stems are browsed. 3 = 85%-26% of the displant/welland plant cover has a stability rating ≥ 6 6 = 75%-85% of the riparian/welland plant cover has a stability rating ≥ 6 6 = 55%-65% of the riparian/welland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/welland plant cover has a stability rating ≥ 6 9 = less than 55% of the riparian/welland plant cover has a s	potential for woody spe 8 = all age classes of read shrubs, there may mature individuals and 4 = two age classes of or the stand is compris 2 = disturbance induced dominate. Re-evaluate	active woody ative woody r be one age a young age native riparia ed of mainly	riparian species present iparian species clearly at class of each absent. Of class present indicate p	(see table, Fig sent, all other ten, it will be th	2) s well represented. For sites with potential for trees
6 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for trees and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class resent indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented, or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re-evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt cedar Actual Score: Potential Score: Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = 25%-50% of the available second year and older stems are browsed. 3 = 5%-25% of the available second year and older stems are browsed. 3 = 5%-25% of the available second year and older stems are browsed. 4 = the site of the riparian/wetland of umbrella shaped. 5 = 165%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 75%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 165%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 5 = 165%-75% of	6 = one age class of nand shrubs, there may mature individuals and 4 = two age classes of or the stand is compris 2 = disturbance induce dominate. Re-evaluate	ative woody r be one age a young age native riparia ed of mainly	iparian species clearly at class of each absent. Of class present indicate p	sent, all other ten, it will be th	s well represented. For sites with potential for trees
and shrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Having mature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represented, or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Ouestion 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be re-evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt cedar Actual Score: Potential Score: Comments Question 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score: Potential Score: Comments Description 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 3 = 5%-25% or more of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 5%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 5%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 3 = 15%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 15% of the riparian/w	and shrubs, there may mature individuals and 4 = two age classes of or the stand is compris 2 = disturbance induce dominate. Re-evaluate	be one age of a young age native riparia ed of mainly	class of each absent. Of class present indicate p	ten, it will be th	s well represented. For sites with potential for trees
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evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or salt cedar Actual Score: Potential Score: Potential Score: Potential Score: Ouestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 0 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score: Potential Score: Potential Score: Comments Question 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 4 = 65%-75% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 100 = 100 + 1	0 = some woody specie	d, (i.e., facult Question 1,	ative, facultative upland incisement, if this has he	species such a appened.	is rose, or snowberry) or non-riparian species
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species) 4 = 0-5% of the available second year and older stems are browsed 3 = 5%-25% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. Many of the shrubs have either a "clubbed" growth form, or they are high-lined or umbrella shaped. 0 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Actual Score:	Comments	ugshin	w roates		
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Actual Score: Potential Score:					6
		ŁÅ.		1	
Comments	Actual Score:	-	Potential Score;	-	
	Comments				

	arian Area/Floodplain Characteristics are Adequ	ate to Dissipate En	ergy and Trap Sedim	ent.
orliment There is	overflow channels, large rock, or woody material pr s little surface erosion and no evidence of long, con e are no headcuts where either overland flow and/o	tinuous erosional are	eas on floodplain/ripari	an area or
= rock and/or wo occurring. Occasio	ody material is present, but generally of insufficient onal evidence of surface erosion. Generally not sev	size to dissipate ene ere enough to have	ergy. Some sediment developed channels.	trapping
scouring) and occ	k and/or woody material available for dissipation of asional headcuts where overland flows or flood cha	nnel flows return to t	he main channel.	
naterial suitable fo substrate materials	codplain lacking any of these attributes: 1)adequate r energy dissipation and sediment trapping. Erosion adequate to resist further erosion. Surface erosion the potential to create meander cut-offs.	nal areas are long a	nd continuous. Lackin	g vegetation of
actual Score:	Potential Score: 6			
Comments				
	SUMMARY			
	3000000	Actual Score	Possible Points	Potential Score
UESTION 1:	Stream Incisement	0	0, 2, 4, 6, 8	0
UESTION 2:	Lateral Cutting	0	0, 2, 4, 6	0
UESTION 3:	Stream Balance	0	0, 2, 4, 6	0
UESTION 4:	Sufficient Soil	0	N/A, 0, 1, 2, 3	0
UESTION 5:	Rootmass	0	N/A, 0, 2, 4, 6	0
UESTION 6:	Weeds	0	0, 1, 2, 3	0
UESTION 7:	Undesirable Plants	- 0	N/A, 0, 2, 4, 6, 8	0
UESTION 8:	Woody Species Establishment	- 0	N/A, 0, 2, 4, 6, 8	0
UESTION 9:	Browse Utilization Riparian/Wetland Vegetative Cover *	- 0	N/A, 0, 2, 4, 6, 8	0
UESTION 10: UESTION 11:	Riparian Area/Floodplain Characteristics *		N/A, 0, 2, 4, 6	0
		Total 0	61	0
otential Score for n	nost Bedrock or Boulder streams (questions 1, 2, 3, 6, 7, 11)	0	(32)	0
otential Score for n	nost low energy "E" streams (questions 1 - 7, 10, 11)	0	_ (49) -	.0
	Actual Score X 100 = % rati	ng #DIV/0!		
TING: =	1 Otornia Odoro		1.7	
TING: =	1 otolika odale			
ATING: =	80-100% = SUSTAINABLE 50-80% = AT RISK			
	80-100% = SUSTAINABLE 50-80% = AT RISK LESS THAN 50% = NOT SUSTAINABLE			
	80-100% = SUSTAINABLE 50-80% = AT RISK			

The score for these qu	and the same of the same of the same of	rtment of Environn	and the same of th	
Note: Answers to these	estions does no questions mus	t have an effect on the t consider the potentia	rating above. I of the stream.	
Question 12. Fisheric	s Habitat / Stre	eam Complexity Note	the answers to question 12 will be	averaged
12a. Adult and Juven 8 = Abundant deep poo	ile Holding/Eso ols, woody debr	cape Cover is, overhanging vegeta	tion, boulders, root wads, underc	ut banks and/or aquatic
6 = Fish habitat is com	mon (see above).		
4 = Fish habitat is notic boulders, root wads an	eably reduced. d/or aquatic veg	Most pools are shallo etation are of limited s	w and/or woody debris, undercut b upply.	anks, overhanging vegetation,
2 = Pools and habitat fe	atures are spar	se or non-existent or t	here are fish barriers.	
0 = There is not enough	water to suppo	ort a fishery		
N/A = Stream would no	t support fish ur	der natural conditions		
Actual Score: _	- la	Potential Score:	8	
-				
Comments _				
12b. Habitat Complex	ity		to the color with and adult softening	ra areanat
			th flow juvenile and adult refugia a	o prosent.
		s are present. High to	ow refugia are reduced.	
0 = High flow refugia an		-		
N/A = Stream would not	support fish un		1	
Actual Score:	12	Potential Score:	4-	
Comments				
Comments				
12c. Spawning Habita B = Areal extent of spaw	ming substrate,	morphology of spawni	ng areas, and composition of spav	
12c. Spawning Habita 8 = Areal extent of spaw 4 = Areal extent of spaw	ming substrate, ming substrate,	morphology of spawni morphology of spawni	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita 8 = Areal extent of spaw 4 = Areal extent of spaw	ming substrate, ming substrate,	morphology of spawni morphology of spawni		ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw D = Areal extent of spaw N/A = Stream would not	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw N/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
4 = Areal extent of spaw	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw N/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita 3 = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw V/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita 3 = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw 4/A = Stream would not actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw N/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw N/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw N/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita B = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw N/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.
12c. Spawning Habita 3 = Areal extent of spaw 4 = Areal extent of spaw 0 = Areal extent of spaw V/A = Stream would not Actual Score:	ming substrate, ming substrate, ming substrate,	morphology of spawni morphology of spawni morphology of spawni der natural conditions.	ng areas, and/or quality of spawning	ng substrate reduced.

	h passage barriers		
0 = Potential fish p			
N/A = Stream would	d not support fish u	inder natural conditions.	
Actual Score:	-6-	Potential Score:	
Comments			
12e. Entrainment 8 = Entrainment of	fish into water diver	rsions not an issue.	
		rsions may be a moderate issue.	
0 = Entrainment of	fish into water diver	rsions may be a major issue.	
Actual Score:	&	Potential Score:	
Comments	to not	Ma.C	
		0 Potential Score 0	
12a-e Avg. Score	Actual Score	0 Folential Score	
		O Polenial Scote	
Question 13. Sola	r Radiation		
Question 13. Sola 6 = More than 75%	r Radiation of the stream reach	n is adequately shaded by vegetation.	igation,
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s	r Radiation of the stream reach tream reach does r	n is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in	rigation,
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2	r Radiation of the stream reach tream reach does n 5-50% of the stream	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade.	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75%	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach	n is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the si 3 = Approximately 2 0 = More than 75% drastically altered by	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade.	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score:	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach r irrigation, etc.	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. n does not have adequate shade by vegetation or the water temperature is pro	
4 = 50-75% of the s 3 = Approximately 2	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach r irrigation, etc.	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. If does not have adequate shade by vegetation or the water temperature is pro	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rirrigation, etc.	not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. In does not have adequate shade by vegetation or the water temperature is properties. Potential Score:	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach ringation, etc.	not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. Indoor not have adequate shade by vegetation or the water temperature is proportional Score: Potential Score:	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rirrigation, etc.	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in modes not have adequate shade. notes not have adequate shade by vegetation or the water temperature is proportional Score: Potential Score:	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 5 = Algae not appare 4 = in small patches	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rirrigation, etc.	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. n does not have adequate shade by vegetation or the water temperature is properties. Potential Score: The state of the state o	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 4 = in small patches 2 = in large patches	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rirrigation, etc.	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. n does not have adequate shade by vegetation or the water temperature is properties. Potential Score:	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 4 = in small patches 2 = in large patches 0 = Mats cover botto	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rirrigation, etc.	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. n does not have adequate shade by vegetation or the water temperature is properties. Potential Score: The state of the state o	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the s 3 = Approximately 2 0 = More than 75% drastically altered by Actual Score: Comments Question 14. Algae 6 = Algae not appare 4 = in small patches 2 = in large patches	r Radiation of the stream reach tream reach does in 5-50% of the stream of the stream reach rirrigation, etc.	not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. In does not have adequate shade by vegetation or the water temperature is properties. Potential Score: The potential score: The potential score is properties and the potential score is properties. The potential score is properties and potential score is properties at the potential score is properties. The potential score is properties and potential score is properties at the potential score is properties. The potential score is properties at the potential score is properties at the potential score is properties.	
Question 13. Sola 6 = More than 75% 4 = 50-75% of the sign of th	r Radiation of the stream reach tream reach does n 5-50% of the stream of the stream reach rirrigation, etc.	h is adequately shaded by vegetation. not have adequate shading or the water temperature is probably elevated by in m does not have adequate shade. n does not have adequate shade by vegetation or the water temperature is properties. Potential Score:	

6 = none				
4 = Slight				
2 = Moderate				
0 = Extensive				
N/A = No water				
Actual Score:		Potential Score:	6	
Comments				
Question 16. Bac	teria			
		ic sources of bacteria		
2 = Likely sources of	of bacteria are pres	sent. Wastewater or	concentrated livestock op	perations are the most common sources.
0 = Feedlots are co	mmon or raw sew	age is entering the str	eam	
Actual Score:		Potential Score:	4	
Comments	Caudes			
Question 17. Mac		and a community of more	evolutententen Stream	willes usually have an abundance of may
t = The stream has lies, caddis flies an	a healthy and dive d/or stone flies.		croinvertebrates. Stream as fly and midge larva.	riffles usually have an abundance of may
= The stream has lies, caddis flies an = The stream is d	a healthy and dive d/or stone flies. ominated by polluti	ion tolerant taxa such		riffles usually have an abundance of may
4 = The stream has lies, caddis flies an 2 = The stream is do 3 = Macroinvertebra	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such		riffles usually have an abundance of may
4 = The stream has lies, caddis flies an 2 = The stream is do 3 = Macroinvertebra 3/A = Stream reach	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such		riffles usually have an abundance of may
4 = The stream has lies, caddis flies and 2 = The stream is do 0 = Macroinvertebra VA = Stream reach actual Score:	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may
4 = The stream has lies, caddis flies an	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may
4 = The stream has lies, caddis flies and 2 = The stream is do 3 = Macroinvertebra MA = Stream reach actual Score:	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may
= The stream has lies, caddis flies and = The stream is do = Macroinvertebra I/A = Stream reach actual Score:	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may
4 = The stream has lies, caddis flies and 2 = The stream is do 3 = Macroinvertebra MA = Stream reach actual Score:	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may
4 = The stream has lies, caddis flies and 2 = The stream is do 0 = Macroinvertebra VA = Stream reach actual Score:	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may
4 = The stream has lies, caddis flies and 2 = The stream is do 0 = Macroinvertebra VA = Stream reach actual Score:	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may
4 = The stream has lies, caddis flies and 2 = The stream is do 0 = Macroinvertebra VA = Stream reach actual Score:	a healthy and dive d/or stone flies. orninated by polluti des are rare or abs	ion tolerant taxa such sent		riffles usually have an abundance of may

Question 18. Irrig Evaluate effects fro	igation impacts (Assess during critical low flow periods or you may need to inquire locally a rom de-watering or inter-basin transfer of water.)	about this.
8 = There are no n	noticeable impacts from irrigation	
organisms.	ow resulting from irrigation practices are noticeable, however flows are adequate to support	aquatic
4 = Flows support	aquatic organisms, but habitat, especially riffles are drastically reduced or impacted.	
2 = The flow is low	v enough to severely impair aquatic organisms	
0 = All of the water	r has been diverted from the stream	
N/A = Stream reach	ch is ephemeral.	
Actual Score:	4 Potential Score: 8	
Comments	upoleam ruich romes in	
Question 19. Land	nduse activities – Sources	
appear to be natura		
6 = There are some timber harvesting, u	e signs of impact from landuse activities such as grazing, dryland agriculture, irrigation, fee urban, roads, etc.	diots, mining,
4 = Impacts from la	anduse activities are obvious and occur throughout most of the stream reach. For example	, there are
	uman induced erosion, saline seeps or overgrazing within the watershed.	
2 = Landuse impact overwhelming evide	cts are significant and widespread. Visual observation and photo documentation would pro- tence that the stream is impaired.	vide
	cts are so intrusive that the stream has lost most of its natural features. The stream does r	not appear to be
	Miles in the state of the state	
Actual Score:	Potential Score: 8	
Comments		
Comments Fotal Actual	Potential Score:	
Comments Total Actual		
Comments Total Actual RATING		#DIV/0!
Comments Total Actual RATING		#DIV/OI
Actual Score; Comments Total Actual RATING OVERALL RATING	Potential Score:	#DIV/0!

Waterbody Name Station ID Lat Lat Lat/Long obtained by method other Samples Taken:	Dlat Crk		Personnel: Agridiano Broawin
at/Long obtained by methor	Visit#	tion Decision from Man Pour	HUC /6030/03
amples Taken:	other than GPS? Y N If Y	Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	GPS Datum (Circle One): NAD 27 NAD 83 WGS84 what is the map scale?
E		Sample ID/Eite Locations	1
3	Nutrients Metals Commons		Sample Collection Procedure
Sediment		+	GKAB
Macroinvertebrate	Macroinvertebrate Habitat Asmt.		SED-1
Algae/Macrophytes	Aquatic Plant Form		-
Chlorophyli a		A-DOOLEG	PERI-1 OTHER:
Habitat Assessment S	Stream Reach Asmr Corbus)	CHLPHL-2 OTHER:
	Pebble Court & Dines		Purpose:
	2011112		
Photographs			
Field Notes			
Other			
Measurements: Time:	Marrie 17 2.0	firmostaleses Mal P	
Q / Flow (cfs)	Est Site	Site User Comments	Kick Length (Pt.):
Temp: (C) W	_	See Commens:	
pH: C.U	-41		
SC: (mS/cm)	4.00		
SC x 1000 =	Umbolem		
DO: (mg/L)	909		
TUR: Clear Slight Turbid Opacome	urbid Obaque		
Turbidity Comments: .	NEO		
		The second secon	

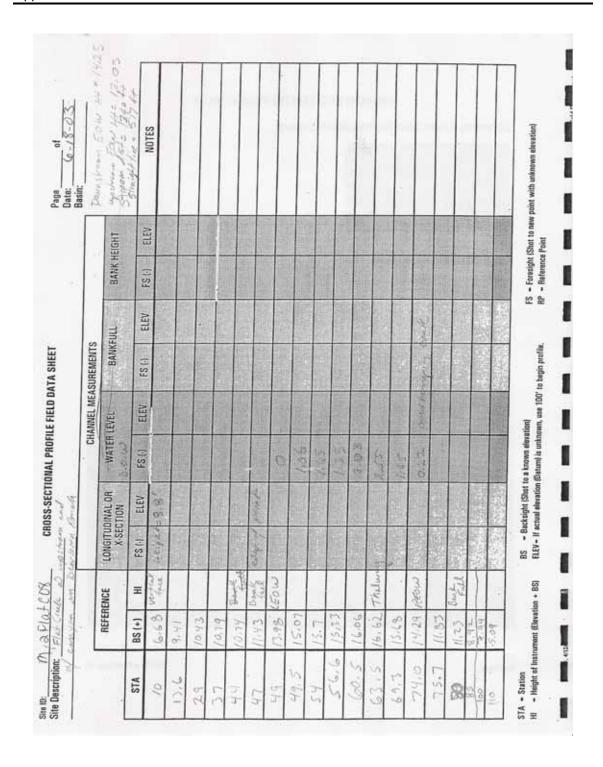
Wa	sterbody:	at Crk	buersion		Station ID:	MIZFIELO
Pe	rsonnel:					
	Distance from initial point	**Depth	**Velocity (at point)	**Width	"Area	"Discharge
1	14	0	.0	0		
2	15	,4	.13			4
3	16	.85	,50			
4	17	128	1.50			
5	192	1.8	1,46			
6	19	2.1	1.50			
7	20	2.6	173			
8	- જે ા	3.0	1.97			
9	22	3.0	1.05			
10	23	3.0	2.07			
11	24	2.9	200			
12	25	2.8	1.97			
13	26	24	2.10			
14	27	2,55	2.04			
15	29	2.5	206			
16	29	2.5	193			
17	30	25	1.87			
18	31	249	1.54			
9	36	2.1	149			
10	33	1.8	1,25			
1	34	1.4	0,55			
2	35	0,75	0.09			
3	36	D	D			
4						
5						
6						
7						
8						
9						
0						

				(and bet page)	Trip ID: Arc Declary Date: 6-18-03 Personnel: Lo dia Discovica
Waterbody Name Station ID	198	Val Creek		Location Select Broken R& Clark HUC	lack HUC /ut38183
Lat/Long obtained b	y met	A Long 2 0 3 3 C 8 c	If Y wha	Lat 4 ≠ 15 44 L M. Long 112° 03 34 .	GPS Datum (Circle One); NAD 27 NAD 83 WGS84 what is the map scale?
Samples Taken:				Sample ID/Ele Locations	1
Water	B	Nutrients Metals Commons	Thoms	O 3 September 1	Sample Collection Procedure
Sediment					GRAB
Macroinvertebrate		Macroinvertebrate Habitat Asmt.			SED-I
Algae/Macrophytes		Aquatic Plant Form			
Chlorophyll a				DScoring To be a	PEKI-1 OTHER:
Habitat Assessment		Stream Reach Asmt Charl		THE PERSON NAMED IN COLUMN	(1)
Substrate	×				Purpose: TWD[
Transect	×				
Photographs	Ø				
Field Notes	Z				
Other					
Measurements:	Time:	ne: /3:30	Macroiny	Macroinvertebrate Kick Duration:	Kitch Lancoth (IS to
Q / Flow (cfs)		Est.	Site Visi	Site Visit Comments:	Some Longitt (PL):
Temp: (°C) 21,51	A	w al 51 A			
pH: 8.44	000		BEHI	mose to months to be	
SC: (mS/cm) : 477		433		7	
SCx 1000 =	20,00	hmhovem	10		
TUR: Clear Si	H H	TUR: Clear Slight X Turbid Omnowed			
Turbidity Comments:		7.39 ATO			
			-	2 00 10 Per 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Date: 19-18-03	City Viels Co. 1	02 27	37
2111	Site Visit Code		7
Waterbody: Flut Little	Station ID:	: MIRFAN	C08
Personnel: Laidlang Knutson &	ika Bauman		
Bankfull Width (W _{bkt}) WIDTH of the stream channel, at bankfull stage elevation	ion, in a riffle section	_Ft.	
Mean DEPTH (d _{bkf}) Mean DEPTH of the stream channel cross-section, at briffle section.	pankfull stage elevation, in a	Ft.	
Bnkfl. X-Section AREA (Abkt) AREA of the stream channel cross-section, at bankfull	stage elevation, in a riffle section	Sq. Ft.	
Width/Depth RATIO (W _{bkf} / d _{bkf}) Bankfull WIDTH divided by bankfull mean DEPTH, in a	riffle section.	1	1,36
Maximum DEPTH (d _{mbkf})		Ft.	
Maximum depth of the bankfull channel cross-section, of bankfull stage and thalweg elevations, in a riffle section		7	-
WIDTH of Flood-Prone Area (W _{tpa})	97	Ft. //.5	
Twice maximum DEPTH, or $(2 \times d_{mbst})$ = the stage/elever WIDTH is determined. (riffle section)	ation at which flood-prone area		
Entrenchment Ratio (ER)			124
The ratio of flood-prone area WIDTH divided by bankfull riffle section)	channel WIDTH. (W _{ba} / W _{bid})		
Channel Materials (Particle Size Index) D50		mm.	-
The D50 particle size index represents the median diam- sampled from the channel surface, between the bankfull			
Water Surface SLOPE (S)		Ft./Ft.	
Channel slope = "rise" over "run" for a reach approximate vidths in length, with the "riffle to riffle" water surface slop t bankfull stage.			
Channel SINUOSITY (K)			
inuosity is an index of channel pattern, determined from ivided by valley length (SL/VL); or estimated from a ratio hannel slope (VS/S).			
Stream Type			
omments:			

	Waterbody: Flo	f CK			Station I	D: MIDPLATED
	Personnel:	Total	- 73 - 49:	24		7.63
	"Distance from initial point	**Depth	"Velocity (at point)	**Width	"Area	**Discharge
1	49	,9	15			
2	50	1,3	e			
3	51	1.5	E			
4	52	1.6	B			
5	53	1.2	15			
6	54	1.2	.6			
7	55	1.15	1\$1			
В	66	1.5	26,14			
9	57	1.4	,25			
10	68	15	,21			
11	69	1.5	,58			
12	60	1.8	.75			
13	61	2.1	,96			
14	62	2,5	.92			
15	63	2.7	.79			
16	64	五2,5	,82			
17	65	2.3	ildo			
18	66	2.4	,56			
19	47	2.3	,50			
20	68	2,1	,33			
21	69	2.6	,28			
22	70	1,85	,26			
23	71	1.3	K			
14	72	.9	W			
5	73	15,65	B			
6						
7	Color I					
8						
9						
0						

Revised 3/2003 DMA 9/ SUBSTRATE DEQ/MDM Site Visit Code: 03-67/4 6-14-03 Waterbody: Plat Creek Blow B. dtan STORET Station ID: MIDSTALCOX Personnel: Howevente plant in PHTLE PEBBLE COUNT (Other) Riffle Characteristic Group: PEBL-CNT Count Count Particle Category ize (mm) Row ID % of Total Cum. Total Sum 0 Silt / Clay <1 THERET 0.00% 0 0.00% Sand 1-2 1111 2-4 0 0.00% Very Fine MIL MININ 4-6 0 0.00% Fine 0 0.00% Fine 6-8 0 0.00% GRAVELS 8 - 12 Medium 12 - 16 Mil 0.00% 0 Medium 16 - 22 INDMITT 0 0.00% 8 Coarse 22 - 32 THINI 0 0.00% Coarse 32 - 45 MILIAN 0 0.00% Very Coarse 10 45 - 64 0 0.00% 11 Very Coarse 64 - 90 0 0.00% 12 Small 0.00% 90 - 128 0 Small 0 128 - 180 0.00% 14 Large 0 0.00% 180 - 256 Large 256 - 362 0 0.00% 16 Small BOULDERS 0 0.00% 362 - 512 Small 17 0.00% 512 - 1024 0 18 Medium 1024 - 2048 0 0.00% Large 19 0 0.00% > 2048 Bedrock 20 0 0 0 0.00% Total # Samples 21 Pebble Count Data Entry Form



Station ID:	1419	Plate	38	Date: _6	2-18-03	Site Visit Code:	MIDAHA	+C08
Waterbody:	Flat	creek	Below	Birdtail	Rd	Reach Length:		
Waterbody	Seg ID:	0			Personnel	+ Ladlaw 1	Coutson B	Doman
Station ID's	on reach:							
Question 1		ncisemen	t:					
8 = channel the incised o model)	stable, no channel, T	active do here is pe	wncutting oc rennial ripari	ian vegetation v	will established	rent but a new, stat in the riparian area	. (Stage 1 and 5,	Schumm's
6 = channel the falling ba	has evide ands, solid	nce of old disturban	downcutting ce evident. (that has begui (Stage 4).	n stabilizing, ve	getation is beginning	ng to establish, ev	en at the base o
						nt further degradati		
vegetation th	hat is pres	ent is mair	nly pioneer s	pecies. Bank f	ailure is commo			
or rare flood	events ac	cess the f	lood plain. 1	Tributaries will a	also exhibit dow	ive downcutting is incutting/headcuts.	(Stage 2)	Only occasiona
The presenc	e of active	headcuts	should nea	rly always keep	the stream rea	ach from being rate	d sustainable.	
Actual Score	к .	6	Po	tential Score:	8			
Comments							2 0 40	
- 1111111111111111111111111111111111111	Percent	of Stream	banks with	Active Latera	Cutting:			
Question 2,				Active Latera				
Question 2,	al bank ero	sion is in	balance with		d its setting			
Question 2, i = the latera i = there is a	al bank erd a minimal a	sion is in	balance with active latera	the stream an	d its setting occurring			
Question 2, i = the laters i = there is a 2 = there is a	al bank ero a minimal a a moderate	sion is in a mount of amount of	balance with active latera of active latera k erosion oc	the stream and bank erosion ral bank erosion curring	d its setting occurring n occurring			
Question 2, 5 = the laters 4 = there is a	al bank ero a minimal a a moderate excessive l	sion is in a mount of amount of	balance with active latera of active latera k erosion oc	the stream and bank erosion ral bank erosio	d its setting occurring n occurring			
Question 2, 5 = the laters 5 = there is a 2 = there is a 0 = there is e	al bank ero a minimal a a moderate excessive l	sion is in a mount of amount of	balance with active latera of active latera k erosion oc	the stream and bank erosion ral bank erosion curring	d its setting occurring n occurring			
Question 2, 5 = the laters 5 = there is a 2 = there is a 0 = there is e actual Score	al bank ero a minimal s a moderate excessive l	esion is in amount of amount of ateral ban	balance with active latera of active late k erosion oc Pot	the stream and bank erosion ral bank erosion curring tential Score:	d its setting occurring in occurring	ing Supplied by t	ne Watershed:	
Question 2, i = the laters = there is a = there is a = there is e actual Score comments tuestion 3, = the stream	al bank ero a minimal a moderate excessive I : - The Strea m exhibits	esion is in its amount of a am	balance with active latera of active latera k erosion oc Pot slance with sediment/b	the stream and bank erosion ral bank erosion curring tential Score:	d its setting occurring in occurring	ing Supplied by the		ons as would be
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Duestion 2, i = the laters i = there is a i = the stream i = sediment i = mid-chan	al bank erca a minimal a a moderate axcessive l c The Strea m exhibits a stable, dy clogged g nel bars au braided (e	esion is in la amount of a amo	balance with active latera of active lat	the stream and bank erosion ral bank erosion ral bank erosion curring tential Score: the Water and edload deposit a riffies or pools ing braided sys	d its setting occurring in occurring	ccurs on point ban nce of excess sed at least 3 active cha	s and other location	ons as would be

4 = 60% to 80% of the streambank comprised of plant species with deep, binding root masses 2 = 30% to 60% of the streambank comprised of plant species with deep binding root masses 0 = less than 30% of the streambank comprised of plant species with deep binding root masses Actual Score: Potential Score: Potential Score: Comments Cult Boul - Lalling veg. coult - Gleep - 40% coult Coult for the riparian area has noxious weeds 1 = 1%-5% of the riparian area has noxious weeds 0 = over 5% of the riparian area has noxious weeds Actual Score: Potential Score: Pot			nt to Hold Water and A	
1 = 35% to 65% of the riparian area with sufficient soil to hold water and act as a rooting medium 0 = 35% or less of the riparian area with sufficient soil to hold water and act as a rooting medium Actual Score: 3				
O = 35% or less of the riparian area with sufficient soil to hold water and act as a rooting medium Actual Score: 3 Potential Score: 3. Comments Question 5, Percent of Streambank with Vegetation having a Deep, Binding Rootmass: (see Appendix I for stability ratings for most riparian, and other, species) 8 = more than 80% of the streambank comprised of plant species with deep, binding root masses 4 = 60% to 80% of the streambank comprised of plant species with deep, binding root masses 2 = 30% to 60% of the streambank comprised of plant species with deep binding root masses 0 = less than 30% of the streambank comprised of plant species with deep binding root masses Actual Score: Potential Score: Comments Public Public Public Potential Score: 3 = No noxious weeds are present 2 = 0.1% of the riparian area has noxious weeds 1 = 1%-5% of the riparian area has noxious weeds 2 = 0.1% of the riparian area has noxious weeds 2 = 0.1% of the riparian area has noxious weeds 2 = 1%-5% of the riparian area has undesirable Plants: 1 = 1% or less of the riparian area has undesirable plants 2 = 5%-10% of the riparian area has undesirable plants 5 = 5%-10% of the riparian area has undesirable plants 2 = 0.1% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 2 = 10% of the riparian area has undesirable plants 3 = 10% of the riparian area has undesirable plants 4 = 10% of the riparian area has undesirable plants 5 = 10% of the riparian area has undesirable plants 5 = 10% of the riparian area has undesirable plants				
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Ouestion 8, Woody Species Establishment and Regeneration: (Note: Skip this question if the riparian area has no potential for woody species) 8 = all age classes of native woody riparian species present (see table, Fig 2) 6 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for transfer individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represent or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluated Duestion 1, incisement, if this has haspened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or a codar Actual Score: Potential Score: Comments Cuestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species 2 = 25%-60% of the available second year and older stems are browsed 2 = 25%-60% of the available second year and older stems are browsed 2 = 25%-60% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = the native of the available second year and older stems are browsed. 3 = 50, 25% of the available second year and older stems are browsed. 4 = 65% of the available second year and older stems are browsed. 5 = 675%-85% of the available second year and older stems are browsed. 6 = 675%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 75%-85% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = 100 = 100 = 100 = 100 = 100 = 100 = 100 = 100 = 100 = 100 = 100 = 100					
6 = one age class of native woody riparian species clearly absent, all others well represented. For sites with potential for train distrubs, there may be one age class of each absent. Often, it will be the middle age group(s) that is (are) lacking. Hav nature individuals and a young age class present indicate potential for recovery. 4 = two age classes of native riparian shrubs and/or two age classes of riparian trees clearly absent, other(s) well represent or the stand is comprised of mainly mature, decadent or dead plants 2 = disturbance induced, (i.e., facultative, facultative upland species such as rose, or snowberry) or non-riparian species dominate. Re-evaluate Question 1, incisement, if this has happened. 0 = some woody species present (>10% cover), but herbaceous species dominate (at this point, the site potential should be evaluated to ensure that it has potential for woody vegetation). OR, the site has at least 5% cover of Russian olive and/or scedar Actual Score: Potential Score: Potential Score: Comments Cuestion 9, Utilization of Trees and Shrubs: (Note: Skip this question if the riparian area has no potential for woody species) 4 = 0-5% of the available second year and older stems are browsed 2 = 25%-50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 1 = more than 50% of the available second year and older stems are browsed. 2 = there is noticeable use (10% or more) of unpalatable and normally unused woody species. Comments Cuestion 10, Riparian/Wetland Vegetative Cover in the Riparian Area/Floodplain and Streambank: 8 = 85% or more of the riparian/wetland plant cover has a stability rating ≥ 6 6 = 75%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 9 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 1 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6 2 = 55%-65% of the riparian/wetland plant cover has a stability rating ≥ 6			lishment and Regene	ration: (Note	e: Skip this question if the riparian area has no
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earian Area/Floodpla r overflow channels, is is little surface erosio re are no headcuts w cody material is prese ional evidence of surf ck and/or woody mate	arge rock, or wood in and no evidence here either overlan int, but generally of ace erosion. Gene	y material present of long, continuou d flow and/or floo f insufficient size t	and adequate to us erosional area d channel flows r	dissipate energy an s on floodplain/ripari eturn to the main ch	d trap an area or
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ional evidence of surf ck and/or woody mate	ace erosion. Gene	Insufficient size t	and the second		
ck and/or woody mate		raily not severe e	to dissipate energenough to have de	y. Some sediment i eveloped channels.	rapping
casional headcuts wh	rial available for di ere overland flows	ssipation of energ	gy or sediment tra	apping. There is sur main channel.	ace erosion
loodplain lacking any					or 3) woody
or energy dissipation is adequate to resist for	and sediment trapp inther erosion. Su	oing. Erosional ar rface erosion is of	reas are long and	continuous, Lackin	g vegetation
6	Potential Score:	5			
-					
		SUMMARY			
			A-t1 C	Describle Delete	Potential Score
Ctroom Incidemen					0
			0		0
			0		0
Sufficient Soll			0	N/A, 0, 1, 2, 3	0
Rootmass			0	N/A, 0, 2, 4, 6	0
Weeds			0	0, 1, 2, 3	0
Undesirable Plant	3		0	0, 1, 2, 3	0
			0	N/A, 0, 2, 4, 6, 8	0
			0	N/A, 0, 1, 2, 3, 4	0
	Vegetative Cover '		0		0
			0	N/A, 0, 2, 4, 6	0
		Total	0	61	0
			0	(32)	0
most low energy "E" :	treams		0	(49)	0
(questions 1 –	Market III at				
	LEGISLAND CONTRACTOR C	100 = % rating	#DIV/0!		
80-100% = SUSTA	INABLE				
50-80% = AT RISI	<	BLE			
	Stream Incisement Lateral Cutting Stream Balance Sufficient Soil Rootmass Weeds Undesirable Plants Woody Species En Browse Utilization Riparian/Wetland Riparian Area/Flootmost Bedrock or Boul (questions 1, 2, 3) most low energy "E" s (questions 1 – 2) Act. 80-100% = SUSTA 50-80% = AT RISH LESS THAN 50% s	Stream Incisement Lateral Cutting Stream Balance Sufficient Soil Rootmass Weeds Undesirable Plants Woody Species Establishment Browse Utilization Riparian/Wetland Vegetative Cover* Riparian Area/Floodplain Characteris most Bedrock or Boulder streams (questions 1, 2, 3, 6, 7, 11) most low energy "E" streams (questions 1 - 7, 10, 11) Actual Score Potential Score 80-100% = SUSTAINABLE 50-80% = AT RISK LESS THAN 50% = NOT SUSTAINA	Stream Incisement Lateral Cutting Stream Balance Sufficient Soil Rootmass Weeds Undesirable Plants Woody Species Establishment Browse Utilization Riparian/Wetland Vegetative Cover* Riparian Area/Floodplain Characteristics* Total most Bedrock or Boulder streams (questions 1, 2, 3, 6, 7, 11) most low energy "E" streams (questions 1 – 7, 10, 11) Actual Score Potential Score 80-100% = SUSTAINABLE	SUMMARY Stream Incisement	Summary Actual Score Possible Points O

P v				
	Montana Dep	artment of Environmental (Quality Supplemental Que	stions
The score for thes	e questions does n	ot have an effect on the rating a est consider the potential of the	above.	
		ream Complexity Note: the an	swers to question 12 will be av	eraged
12a. Adult and Jo 8 = Abundant deep	uvenile Holdi: g/E o pools, woody det	scape Cover oris, overhanging vegetation, bo	oulders, root wads, undercut be	anks and/or aquatic
6 = Fish habitat is				
4 = Fish habitat is boulders, root wad	noticeably reduced s and/or aquatic ve	. Most pools are shallow and/or getation are of limited supply.	woody debris, undercut banks	, overhanging vegetation,
2 = Pools and habi	tat features are spo	arse or non-existent or there are	fish barriers.	
0 = There is not en	ough water to supp	ort a fishery		
N/A = Stream woul	ld not support fish u	inder natural conditions		
Actual Score:	6	Potential Score: 8		
Comments				
12b. Habitat Com	plexity	a marketing	and add to the land of the	
		ver types is present. High flow jobs are present. High flow refus		GOOTH.
		oes are present. High flow refu	jia are reduced.	
) = High flow refug				
N/A = Stream would	d not support fish u	ryter netural conditions		
Actual Score:	<u>*3</u>	Potential Score: 4	_	
Actual Score:				
Actual Score: Comments	# 3	Potential Score: 4	s, and composition of spawning	g substrate are excellent.
Actual Score: Comments 2c. Spawning Hall Actual extent of the second sec	bitat (salmonid si	Potential Score: 4		
Actual Score: Comments 2c. Spawning Habitation of the Areal extent of the Areal exte	bitat (salmonid sispawning substrate	Potential Score: 4	s, and/or quality of spawning su	ubstrate reduced.
Actual Score: Comments 2c. Spawning Ha 3 = Areal extent of s 4 = Areal extent of s 9 = Areal extent of s	abitat (salmonid si spawning substrate spawning substrate spawning substrate	Potential Score: 4 reams only) , morphology of spawning areas , morphology of spawning areas	s, and/or quality of spawning su	ubstrate reduced.
Actual Score: Comments 12c. Spawning Ha 3 = Areal extent of the Areal extent would be a stream would be a stre	abitat (salmonid si spawning substrate spawning substrate spawning substrate	reams only) , morphology of spawning areas, morphology of spawning areas, morphology of spawning areas	s, and/or quality of spawning su s, and/or quality of spawning su	ubstrate reduced.
Actual Score: Comments 12c. Spawning Ha 3 = Areal extent of a 4 = Areal extent of a 0 = Areal extent of a N/A = Stream would Actual Score:	abitat (salmonid si spawning substrate spawning substrate spawning substrate	reams only) , morphology of spawning areas, morphology of spawning areas, morphology of spawning areas, morphology of spawning areas	s, and/or quality of spawning su s, and/or quality of spawning su	ubstrate reduced.
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Actual Score: Comments 12c. Spawning Ha 8 = Areal extent of a 1 = Areal extent of a 2 = Areal extent of a 3 = Areal extent of a 4 = Stream would actual Score:	abitat (salmonid si spawning substrate spawning substrate spawning substrate	reams only) , morphology of spawning areas, morphology of spawning areas, morphology of spawning areas, morphology of spawning areas	s, and/or quality of spawning su s, and/or quality of spawning su	ubstrate reduced.
Actual Score: Comments 12c. Spawning Ha 8 = Areal extent of a 1 = Areal extent of a 2 = Areal extent of a 3 = Areal extent of a 4 = Stream would actual Score:	abitat (salmonid si spawning substrate spawning substrate spawning substrate	reams only) , morphology of spawning areas, morphology of spawning areas, morphology of spawning areas, morphology of spawning areas	s, and/or quality of spawning su s, and/or quality of spawning su	ubstrate reduced.
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Actual Score: Comments 12c. Spawning Ha 3 = Areal extent of a 4 = Areal extent of a 0 = Areal extent of a N/A = Stream would Actual Score:	abitat (salmonid si spawning substrate spawning substrate spawning substrate	reams only) , morphology of spawning areas, morphology of spawning areas, morphology of spawning areas, morphology of spawning areas	s, and/or quality of spawning su s, and/or quality of spawning su	ubstrate reduced.
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Actual Score: Comments 12c. Spawning Ha 3 = Areal extent of a 4 = Areal extent of a 0 = Areal extent of a N/A = Stream would Actual Score:	abitat (salmonid si spawning substrate spawning substrate spawning substrate	reams only) , morphology of spawning areas, morphology of spawning areas, morphology of spawning areas, morphology of spawning areas	s, and/or quality of spawning su s, and/or quality of spawning su	ubstrate reduced.

	ish passage barrie			
	passage barriers p			
N/A = Stream wo		under natural condition		
Actual Score:	8	Potential Score:	8	
Comments				
12e. Entrainmen 8 = Entrainment o	nt If fish into water div	versions not an issue.		
		versions may be a mod	derate issue.	
0 = Entrainment o	f fish into water div	versions may be a maj	or issue.	
Actual Score:		Potential Score:	5	
Comments	Hoodquie	es present up	ostrom there he	ut druving
12a-e Avg. Score	Actual Score	0	Potential Score	0
Question 13. Sol	ar Radiation			
Question 13. Sol	ar Radiation 6 of the stream rea	ach is adequately shad	led by vegetation.	
6 = More than 759	6 of the stream rea	ach is adequately shads not have adequate s		perature is probably elevated by irrigation
6 = More than 759 4 = 50-75% of the	6 of the stream rea stream reach does	s not have adequate s	hading or the water tem	perature is probably elevated by irrigation
6 = More than 759 4 = 50-75% of the 3 = Approximately 0 = More than 75%	6 of the stream res stream reach does 25-50% of the stre 6 of the stream rea	s not have adequate s eam does not have ad	hading or the water tem equate shade.	perature is probably elevated by irrigation or the water temperature is probably
4 = 50-75% of the 3 = Approximately	6 of the stream rea stream reach does 25-50% of the stre 6 of the stream rea by irrigation, etc.	s not have adequate s eam does not have ad	hading or the water tem equate shade, quate shade by vegetati	
6 = More than 759 4 = 50-75% of the 3 = Approximately 0 = More than 75% drastically altered in	6 of the stream rea stream reach does 25-50% of the stre 6 of the stream rea by irrigation, etc.	s not have adequate s eam does not have ade sch does not have ade	hading or the water tem equate shade, quate shade by vegetati	
6 = More than 75% 4 = 50-75% of the 3 = Approximately 0 = More than 75% drastically altered to Actual Score:	6 of the stream rea stream reach does 25-50% of the stre 6 of the stream rea by irrigation, etc.	s not have adequate s eam does not have ade sch does not have ade	hading or the water tem equate shade, quate shade by vegetati	
6 = More than 75% 4 = 50-75% of the 3 = Approximately 0 = More than 75% drastically altered to Actual Score: Comments Question 14. Alga-	stream reach does stream reach does 25-50% of the stre to of the stream reach to implication, etc.	s not have adequate s earn does not have ade ich does not have ade Potential Score;	hading or the water tem equate shade, quate shade by vegetati	
6 = More than 75% 4 = 50-75% of the 3 = Approximately 0 = More than 75% drastically altered to Actual Score: Comments Question 14. Algain	stream reach does stream reach does 25-50% of the stre to of the stream reach to implication, etc.	s not have adequate s earn does not have ade ich does not have ade Potential Score;	hading or the water tem equate shade, quate shade by vegetati	
6 = More than 75% 4 = 50-75% of the 3 = Approximately 0 = More than 75% drastically altered to Actual Score:	stream reach does 25-50% of the stream 6 of the stream reach by irrigation, etc.	s not have adequate s earn does not have ade ich does not have ade Potential Score:	hading or the water tem equate shade, quate shade by vegetati	
6 = More than 759 4 = 50-75% of the 3 = Approximately 0 = More than 759 drastically altered if Actual Score: Comments Question 14. Alge 6 = Algae not appa 4 = in small patche 2 = in large patches	stream reach does 25-50% of the stre 5 of the stream rea by irrigation, etc. are growth / Nutrie arent. Rocks are sli s or along channels or discontinuous	s not have adequate seam does not have ade and does not have ade potential Score: ents appery. I edge mats	hading or the water tem equate shade. quate shade by vegetati	ion or the water temperature is probably
6 = More than 759 4 = 50-75% of the 3 = Approximately 0 = More than 759 drastically altered if Actual Score: Comments Question 14. Alge 6 = Algae not appa 8 = in small patche 2 = in large patches	stream reach does 25-50% of the stre 5 of the stream rea by irrigation, etc. are growth / Nutrie arent. Rocks are sli s or along channels or discontinuous	s not have adequate seam does not have ade and does not have ade potential Score: ents appery. I edge mats	hading or the water tem equate shade. quate shade by vegetati	
6 = More than 759 4 = 50-75% of the 3 = Approximately 0 = More than 759 drastically altered if Actual Score: Comments Question 14. Alge 6 = Algae not appa 4 = in small patche 2 = in large patches	stream reach does 25-50% of the stre 5 of the stream rea by irrigation, etc. are growth / Nutrie arent. Rocks are sli s or along channels or discontinuous	s not have adequate seam does not have ade and does not have ade potential Score: Potential Score: ents appery. I edge mats ad conditions) or plants	hading or the water temequate shade. quate shade by vegetati	ion or the water temperature is probably
6 = More than 759 4 = 50-75% of the 3 = Approximately 0 = More than 759 drastically altered in Actual Score: Comments Question 14. Algebra in small patche 2 = in large patches 0 = Mats cover bott	stream reach does 25-50% of the stre 5 of the stream rea by irrigation, etc. are growth / Nutrie arent. Rocks are sli s or along channels or discontinuous	s not have adequate seam does not have ade and does not have ade potential Score: ents appery. I edge mats	hading or the water temequate shade. quate shade by vegetati	ion or the water temperature is probably

Question 18. Irrigation impacts (Assess during critical low flow periods or you may need to inquire locally about Evaluate effects from de-watering or inter-basin transfer of water.) 8 = There are no noticeable impacts from irrigation 6 = Changes in flow resulting from irrigation practices are noticeable, however flows are adequate to support aquire organisms. 4 = Flows support aquatic organisms, but habitat, especially riffles are drastically reduced or impacted. 2 = The flow is low enough to severely impair aquatic organisms 0 = All of the water has been diverted from the stream N/A = Stream reach is ephemeral. Actual Score: 6 Potential Score: 8	
Evaluate effects from de-watering or inter-basin tránsfer of water.) 8 = There are no noticeable impacts from irrigation 6 = Changes in flow resulting from irrigation practices are noticeable, however flows are adequate to support aquaticorganisms. 4 = Flows support aquatic organisms, but habitat, especially riffles are drastically reduced or impacted. 2 = The flow is low enough to severely impair aquatic organisms 0 = All of the water has been diverted from the stream VA = Stream reach is ephemeral. Actual Score: Potential Score: 8	
6 = Changes in flow resulting from irrigation practices are noticeable, however flows are adequate to support aquity organisms. 4 = Flows support aquatic organisms, but habitat, especially riffles are drastically reduced or impacted. 2 = The flow is low enough to severely impair aquatic organisms 0 = All of the water has been diverted from the stream N/A = Stream reach is ephemeral. Actual Score: Potential Score: 8	uatic
arganisms. If a Flows support aquatic organisms, but habitat, especially riffles are drastically reduced or impacted. If a Flow support aquatic organisms, but habitat, especially riffles are drastically reduced or impacted. If a Flow is low enough to severely impair aquatic organisms If a Flow is low enou	uatic
2 = The flow is low enough to severely impair aquatic organisms 2 = All of the water has been diverted from the stream WA = Stream reach is ephemeral. Actual Score: 6 Potential Score: 8 1 potential Score: 4 Jesson differes	
actual Score: Deficion the stream	
N/A = Stream reach is ephemeral. Actual Score: 6 Potential Score: 8 1 polician - there are dueson diffus	
Actual Score: 6 Potential Score: 8 1) poticion there are diversion difches	
1)potream-there are duession ditches	
Comments	
PORTONIA	
Question 19. Landuse activities – Sources	
3 = Landuse practices do not appear to significantly impact water quality or the riparian vegetation. Any impacts to appear to be natural.	that occur
 There are some signs of impact from landuse activities such as grazing, dryland agriculture, irrigation, feedlots imber harvesting, urban, roads, etc. 	s, mining,
= Impacts from landuse activities are obvious and occur throughout most of the stream reach. For example, the	ere are
bytious signs of human induced erosion, saline seeps or overgrazing within the watershed.	
= Landuse impacts are significant and widespread. Visual observation and photo documentation would provide	
verwhelming evidence that the stream is impaired.	
verwhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a	appear to be
verwhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of aquatic life	appear to be
verwhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of aquatic life	appear to be
verwhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of equatic life ctual Score: Calle grazing	appear to be
were whelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of aquatic life ctual Score: Calle grazing	appear to be
everwhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of equatic life ctual Score: Calle gazarg Calle gazarg	appear to be
werewhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of aquatic life ctual Score: Potential Score:	appear to be
remytelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of aquatic life ctual Score: Potential Score: S	appear to be
werewhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of aquatic life ctual Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential Score: Potential S	#DIV/0!
werewhelming evidence that the stream is impaired. = Land use impacts are so intrusive that the stream has lost most of its natural features. The stream does not a apable to support most forms of aquatic life ctual Score: Potential Score: S	
VERALL RATING VERALL RATIN	

Ps = DODO					
6 = none					
4 = Slight					
2 = Moderate					
0 = Extensive					
N/A = No water					
Actual Score:	6	Potential Score:	_6		
Comments					
Question 16. Bac	teria				
		enic sources of bacteria			
2 = Likely sources	of bacteria are pr	resent. Wastewater or	concentrated livestock op	perations are the most common sources	5.
0 = Feedlots are co	ommon or raw se	wage is entering the st			
Actual Score:	_ 2	Potential Score:	_4		
Comments	Timeston	P			
	croinvertebrates				
Question 17. Mad 4 = The stream has lies, caddis flies an	s a healthy and di nd/or stone flies.	iverse community of m	acroinvertebrates, Stream	riffles usually have an abundance of r	nay
Question 17. Mad 4 = The stream has lies, caddis flies an 2 = The stream is d	s a healthy and di ad/or stone flies. Iominated by poll	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Mac 4 = The stream has flies, caddis flies an 2 = The stream is d 0 = Macroinvertebro	s a healthy and di nd/or stone flies. Iominated by poll- ates are rare or a	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Mac 4 = The stream has flies, caddis flies an 2 = The stream is d 0 = Macroinvertebre N/A = Stream reach	s a healthy and di nd/or stone flies. Iominated by poll- ates are rare or a	verse community of mution tolerant taxa such		riffles usually have an abundance of r	may
Question 17. Mad 4 = The stream has flies, caddis flies an	s a healthy and di nd/or stone flies. Iominated by poll- ates are rare or a	verse community of m ution tolerant taxa such bsent		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has flies, caddis flies an 2 = The stream is d 0 = Macroinvertebra V/A = Stream reach Actual Score;	s a healthy and di nd/or stone flies. Iominated by poll- ates are rare or a	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Mac 4 = The stream has flies, caddis flies an 2 = The stream is d 3 = Macroinvertebre N/A = Stream reach	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has lies, caddis flies an 2 = The stream is d 3 = Macroinvertebra VA = Stream reach actual Score;	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has lies, caddis flies an 2 = The stream is d 0 = Macroinvertebra V/A = Stream reach Actual Score;	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has flies, caddis flies an 2 = The stream is d 0 = Macroinvertebra V/A = Stream reach Actual Score;	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has flies, caddis flies an 2 = The stream is d 0 = Macroinvertebra V/A = Stream reach Actual Score;	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has lies, caddis flies an 2 = The stream is d 0 = Macroinvertebra V/A = Stream reach Actual Score;	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has lies, caddis flies an 2 = The stream is d 0 = Macroinvertebra V/A = Stream reach Actual Score;	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay
Question 17. Max 4 = The stream has lies, caddis flies an 2 = The stream is d 3 = Macroinvertebra VA = Stream reach actual Score;	s a healthy and di nd/or stone flies, forminated by poll ates are rare or a n is ephemeral	verse community of mution tolerant taxa such		riffles usually have an abundance of r	nay

Waterbody Name	County Long Long Long Long Long Long Long Lon				(One Station per page)	Trip ID: 2003. DEBEND Date: 7/55/6
Location Visit # Location Location Location Location Location Location Long Location Long Location Long Location Long Location Long Location Long Location L	Long 25 1	Waterbody Name	H	E	County Leading + Clb	HUC
Nutrients Metals Commons Sample ID/File Location: Macroinvertebrate Habitat Asm. Sample ID/File Location: Aquatic Plant Form Street Macroinvertebrate Kick Duration: Est. Site Visit Comments: Pebble Count Street Site Visit Comments:	Nutrients Metals Commons Sample ID/File Location: Macroinvertebrate Habitat Asm. Aquatic Plant Form Stream Reach Asmt Other Bebble Count % Fines Est Reach Asmt Site Visit Comments: Site Visit Comments:	Lat 4791919	met O	Long Visit # 2 Locat Long 12007 S5 hod other than GPS? Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	verified? □ By GPS Da	One): NAD 27
Macroinvertebrate Habitat Asm. Commons Sample Live in Location: Macroinvertebrate Habitat Asm. Commons Stream Reach Asm. Other Stream Reach Asm. Other Stream Reach Asm. Other Stream Reach Asm. Other Stream Reach Asm. Site Visit Comments: Site	Macroinvertebrate Habitat Asm. Commons Sample Live in Location: Aquatic Plant Form Asm. Commons Stream Reach Asm. Other	Samples Taken:			Same to the same of the same o	11
Aquatic Plant Form	Aquatic Plant Form Asm. Asm. Asm. Asm. Asm. Asm. Asuatic Plant Form Asm. Asuatic Plant Form Asm. Astautic Plant Form Astautic Plan	Water		Nutrients Metals Commons		Sample Collection Procedure
Aquatic Plant Form	Aquatic Plant Form	sediment				GRAB
Stream Reach Asmt. Other Pebble Count % Fines Pebble Count % Fines Reach Asmt. Other Reach Asmt.	Stream Reach Asmt. Other Pebble Count % Fines Est A Site Visit Comments: Turbid Opaque Turbid Opaque	Ancroinvertebrate		Macroinvertebrate Habitat Asmr. [7]	13	SED-1
Stream Reach Asmt. Other Pebble Count % Fines Est. Macroinvertebrate Kick Duration: R Site Visit Comments: Turbid Opaque Tur	Stream Reach Asmt. Other Pebble Count % Fines Est Macroinvertebrate Kick Duration: Kick Duration: Macroinvertebrate Kick Duration: Kick Du	Algae/Macrophytes	Ø		20	KICK HESS OTHER:
Stream Reach Asnt. Other Pebble Count % Fines	Stream Reach Asnt. Other Pebble Count % Fines	Thorophyll a			N A	(PERI-1) OTHER:
Pebble Count % Fines Purpose: Purpose:	Pebble Count % Fines Purpose: e: 9 4 Est Macroinvertebrate Kick Duration: Kick Length (P.); Site Visit Comments: Turbid Opsque Turbid Opsque Turbid A 2.8	labitat Assessment		Stream Reach Asmrt Change		CHLPHL-2 OTHER:
e: 9 45 Est. Macroinvertebrate Kick Duration: Site Visit Comments: Site Visit Commen	e: 9 44 Est. Macroinvertebrate Kick Duration: Kick Length (P.): Site Visit Comments: Site Visit Comments:	ubstrate		Pebble Count C. Eine		
e: 9 44 Macroinvertebrate Kick Duration: Site Visit Comments: S	Est. Macroinvertebrate Kick Duration: Site Visit Comments: Sit	ransect				
Est. Macroinvertebrate Kick Duration: Kick Length (Pt.): 19.32 A Site Visit Comments: Site Visit Comme	e: 9 45 Macroinvertebrate Kick Duration: Kick Length (P.): Site Visit Comments: Site Visit Comments: Site Visit Comments:	hotographs	[2]			
Est. Macroinvertebrate Kick Duration: Kick Length (Pt.): Site Visit Comments: Site	Est. Macroinvertebrate Kick Duration: Kick Length (Pt.): Site Visit Comments: Site	ield Notes				
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Est. Site Visit Comments: Site Visit Comments: Site Visit Com	Est. Site Visit Comments: Site Visit Comments: Site Visit Comme	feasurements:	Tim	9.44	Managaran Winter	
9-32 A 2 3 3 3 3 4 3 5 5 5 5 5 5 5 5 5 5 5 5 5	9.32 A 9.32 A 9.32 A 1.32 A 1.33 A 1.34 A 1.35 A	/ Flow (cfs)		Fee	left Comments	S Kick Length (Ft.):
2/3 2/3 1245id Opaq 7.08 10.0	2/3 2/3 104 Turbid Opaq	emp: ('C)	A	Y	San Comments:	
3/3 194. Turbid Opaq	2/3 283 (04) Turbid Opaq	H:	00			
Turbid Opaq	Turbid Opaq	C: (mS/cm)		3/3		
Turbid Opaq	Turbid Opaq	Cx 1000 =		umbokun		
Turbid 7.08	Turbid 7.08	O: (mg/L)	0.	10 41		
4.08	4.08	UR: Clear Slig	zht 🗌	Turbid		
		urbidity Comments:		4.08		

Pe			15 Hoy 20	-	- Common is	mia Flat Cos
	rsonnel: Laur	the foo	aman'			
	Distance from initial point	**Depth	**Velocity (at point)	"Width	**Area	**Discharge
1	2'	0	0	D		
2	3	12	44			
3	4	135	.,25			
4	5	15	.65			
5	-0	.5	. 68			
6	7	. 6	. 64	1		
7	8	.66	. 66			
8	9	- 7	.87			
9	10	. 48	.91	1		
10	11	. 80	.98			
11	12	.85	93			
12	13	. 85	93			
13	14	.95	.85			
14	12	95	.56			
5	134	1.0	. 95			
16	17	.8	1,09			
7	18	,90	1.04			
8	19	GP.	1.01			
19	40	08,	1.12			
20	a)	03.	1.40			
1	98	,70	1,14			
2	23	156	0			
3	23.5	0	0			
4						
5						
6						
7						
8						
9						
0						

	Stream Classification		Revised 3/200
Date:	Site Visit Co	de:	
Waterbody:	Station	ID:	
Personnel:			
BEILL Tab Tong Bankfull Width (W _{bkt}) WIDTH of the stream channel, at	t bankfull stage elevation, in a riffle section	Ft.	
Mean DEPTH (d _{bkt}) Mean DEPTH of the stream chan riffle section.	nnel cross-section, at bankfull stage elevation, in a	Ft.	
Bnkfl. X-Section AREA (A	okt) s-section, at bankfull stage elevation, in a riffle sec	Sq. Ft.	
Width/Depth RATIO (Wbid / Bankfull WIDTH divided by bankfi	/ d _{bkf}) úlf mean DEPTH, in a riffle section.	7	
Maximum DEPTH (d _{mbkf}) Maximum depth of the bankfull ch ankfull stage and thalweg elevati	nannel cross-section, or distance between the ions, in a riftle section	Ft.	
WIDTH of Flood-Prone Are	ea (W _{fpa})	Ft.	
wice maximum DEPTH, or (2 x o VIDTH is determined. (riffle section	d_{most}) = the stage/elevation at which flood-prone aron)	ea	
Entrenchment Ratio (ER)	No		191
he ratio of flood-prone area WID iffle section)	TH divided by bankfull channel WIDTH. (W _{tpa} / W _t	ar)	
Channel Materials (Particle	e Size Index) D50	mm.	
he D50 particle size index repres ampled from the channel surface	ents the median diameter of channel materials, as , between the bankfull stage and thalweg elevation	s ns.	
	or a reach approximately 20-30 bankfull channel iffle" water surface slope representing the gradient	Ft/Ft.	
hannel SINUOSITY (K)	kight 13.05 6 005"/Ushran	Right - 1	0.92
nuosity is an index of channel pa vided by valley length (SL/VL); or nannel slope (VS/S).	ttern, determined from a ratio of stream length estimated from a ratio of valley slope divided by	Tistances	342.51
tream Type	9	_	
omments:			
		Data M	gmt. Approved

Revised 3/2003 DMA SUBSTRATE DEQ/MDM Date: 7-22-03 Site Visit Code: 03-0700 STORET Station ID: MIST 1040 03 Waterbody: Flat Cope k Personnel: Landan Browner PEBBLE COUNT Characteristic Group: PEBL-CNT Riffle Count Count Size (mm) Row ID Particle Category Sum % of Total Cum. Total NMJ 0 0.00% Silt / Clay <1 M: 0 0.00% 1-2 2 Sand 0.00% 0 2-4 3 Very Fine 0.00% 0 Fine 4-6 4 0.00% 6-8 0 Fine 5 0 0.00% 8 - 12 Medium GRAVELS 6 0 0.00% 12 - 16 Medium 7 16 - 22 0 0.00% 8 Coarse

N

22 - 32

32 - 45

45 - 64

64 - 90

90 - 128

128 - 180

180 - 256

256 - 362

362 - 512

512 - 1024

1024 - 2048

> 2048

BOULDERS

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18

19

20

21

Coarse

Small

Small

Large

Large

Small

Small

Medium

Large

Bedrock

Total # Samples

Very Coarse

Very Coarse

Pebble Count Data Entry Form

0.00%

0

0

0

0

0

0

0

0

0

0

0

0

0

0.00%

0.00%

0.00%

0.00%

0.00%

0.00%

0.00%

0.00%

0.00%

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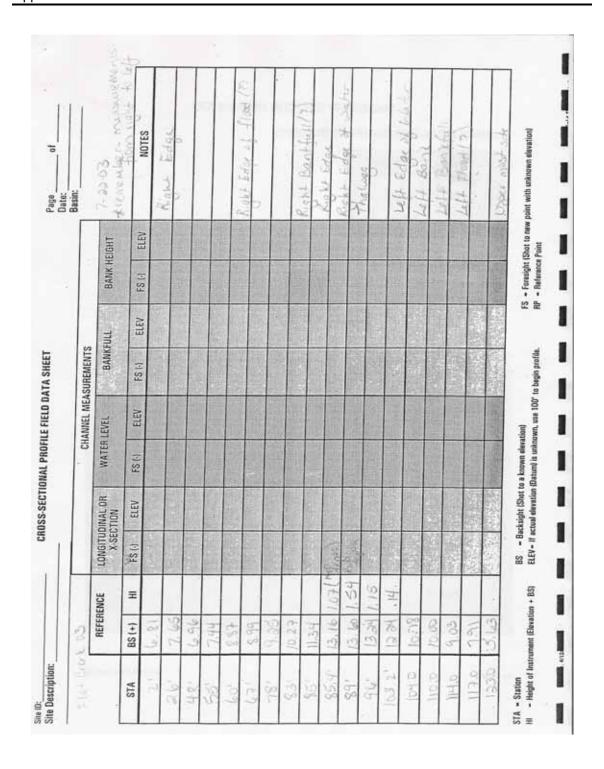
0.00%

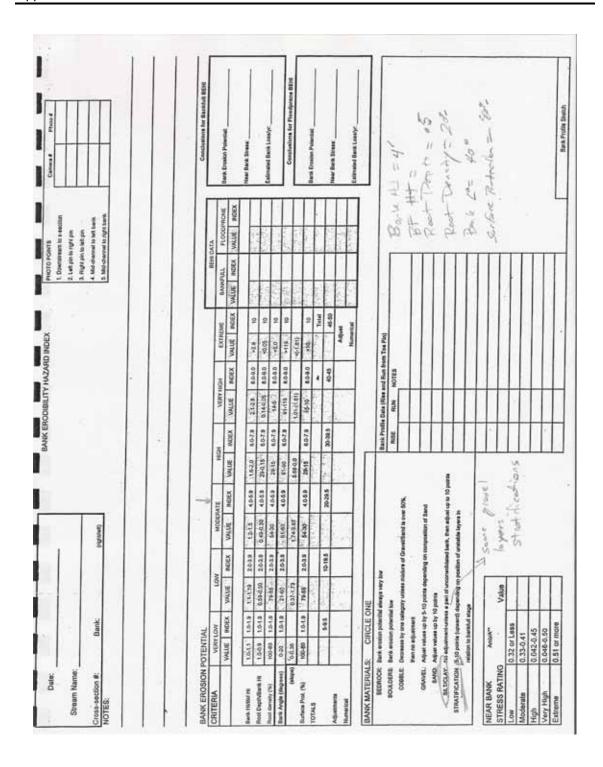
0.00%

180 Final Report

0

0





Naticachody Name 1/14 Const. County P. County	1		(alled to determine source)	Trip ID: 3065-02000 Date: How
Long Congression Long Verified? By GPS Datum (Crele One), NAD 23 NAD 83	10	Visit # O Locati	County Helicis 4 Clark	1
Sample ID/File Location: Commons Sample ID/File Location: Commons	a/Long obtained by rr	Long V Cathod other than GPS? Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	erified? By GPS Datum (C	One): (NAD 27 NAD 83
ment coinvertebrate S Nutrients Metals Commons C D2-08-21 Structure trainvertebrate S Macroinvertebrate Habitat Asm. Commons S Aquatic Plant Form C Stream Reach Asm. C Other C Stream Reach Asm. C Stream Reach Asm. C Stream Stream C Stream Stream Stream Stream C Stream			Sample ID/Fife Location:	
roinvertebrate S Macroinvertebrate Habitat Asmt. B3 783 t.N. rophyll a Stream Reach Asmt. Other strate Pebble Count % Fines strate Pebb		-	03-P4711-2	Sample Collection Procedure
roinvertebrate S Macroinvertebrate Habitat Asmt. D3 D8 1 A quatic Plant Form D3 D8 1 A quatic Plant Form D3 D8 1 A quatic Plant Form D1	diment			OKAB
PerMacrophytes Aguatic Plant Form Other Strate Strate Strate Strate Seest Strate Seest Seest Strate Seest Seest Seest Strate Seest S		_	1	. SED-1
strate Stream Reach Asmt. Other strate Stream Reach Asmt. Other strate Stream Reach Asmt. Other strate Pebble Count % Fines strate Pebble Count % Fines strate Stream Reach Asmt. Other strate Pebble Count % Fines strate Pebble Count % Fines strate Stream Reach Asmt. Other strate Stream Reach Asmt. Other Reach Asmt. strate	-	-	10	KICK HESS OTHER:
Stream Reach Asmt. Other Stream Reach Asmt. Other	lorophyll a		1	PERI-IS OTHER:
Strate Pebble Count % Fines	bitat Assessment	Stream Reach Asmr Charach	11	CHLPHL-2 OTHER:
Secret		-		
Site Visity Comments: 3,54 Notes Contraction: 3,50	Insect	2000		
Alvotes	Otographs			
Site Visit Comments: Time: DEA Site Visit Comments: DEA Site Visit Comments: Site Visit Comments	Id Notes			
Site Visit Comments: Time: Description: Des	her			
Site Visit Comments: St. Site Visit Comments: St.		Casi	11	11
Pr. (C) W 142 A A A A A A A A		Fee		
(mg/cm)		A.92 A	LAINT	
x 1000 = jumbo/cm	21	07.3	MONE	COCIO
St. Clear Slight 1114 の 114 の 1114 の 1114 の 1114 の 1114 の 1114 の 1114 の 114	: (mS/cm)	366		
10 314 111 4 与 111 4 与 111 4 与 111 4 白 111	x 1000 =			
R: Clear Slight Turbid Opaque hiddity Comments: 3,54 わわ		111140		
bidity Comments: 3,54 NTU 3,01 NTU	R: Clear Slight	Turbid Oppose		
3,01 NTV	rbidity Comments:	3,54 NO		
AN A		9,01 NTO		
			AND THE PARTY OF T	

	resonnel:	CBCCK (Mouth		Station ID:	mizflatco
65	Distance from initial point	* Dupth	"Velocity (at point)	r'Width	"Area	"Discharge
1	Z'	D	pt.			7
2	4	. 7	*			
3	6	195	,03			
4	9	1.05	.71			
5	10	7.05	./9			
6	12	175	16			
7	14	1.0	.15			
В	16	1.0	.22			
9	18	19	,15			
10	20	,75	,20			
11	22	,65	, 22			
12	24	.62	.18			
13	26	.45	17			
14	2.9	.65	,20			
15	30	,82	./3			
16	32	.8	1/2			
17	34	.9	.05			-
18	36	1.1	,05			
19	38	,75	.B			
20	4/0	,08	.8'	-		
21	42	,18	,04			
22	44	,49	10			
23	46	-1	1,00			
24	46.6					
25						
26						
27	_					
8						
9						
30						

	BRATE HABITAT ASSESSM			Z/RUN PREVALENCE
Date: 7-04-0			03-0821	
Vaterbody: Final	- Creek At Marit	N	Site: MaTlat	COY
rersonnel: / /	Maw Bowman			
HABITAT			POLICE SERVICES	
PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed riftle; riftle as wide as stream & extends two times width of stream.	Riffle as wide as stream but length less than two times width.	Reduced riffle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
A score: 4.5	9-10	6-8	3-5	0-2
Comments:				
18. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravet, sand, silt, or bedrock substrate.
B. score: 5	9-10	6-8	3-5	0-2
Comments:	mostly brdibek	76000		
2. Embeddedness	Gravel, sobble, or boolder particles are between 0-25% surrounded by fine sediment (particles less than 0.35 mm (.25°)).	Gravel, cobble, or boulder particles are between 25-50 % aurrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
score: O	16-20	11/13	6-10	0-5
Comments:				
Channel Alteration (channelization, straightening, dredging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past attentions (before past 20 years) may be resent, but more recent channel attention is not present.	New embankments present on both banks; co-60% of the stream reach channelized & disrupted.	Banks shored with gabins or cament; over BOX of the stream reach channelized & disrupted.
score: LD	16-20	11-15	6-10	0-5
Comments:				
4. Sediment Deposition	Little or no enlargement of bars & less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravet; 5- 20% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on oid & new bars; 38- 30% of the bottom affected; sediment deposits at obstructions, constrictions, & bends; moderate deposition in pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pool almost absent due to substantial sediment deposition.
score: 15	16-20	11-15	5-10	0-5
Comments:				

5. Chan	el Flow Status		asellow channel; minima hannel substrate	Water fills > 75% of the baseflow channel; < 25% channel substrate exposed.	Water fills 25-75% of the basellow channel; riffle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
5. acore:	1%		16-20	11-15	5-10	0-5
Co	mments:	100				
each I Determi side	Stability (score nank) NOTE: ne left or right while facing enstream.	or bank falls	e; no evidence of erosion re; little apparent future problems.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; moderate frequency & size of erosional areas; up to 60% of banks in reach have erosion; high erosion potential during high flow.	Unstable; many eroded areas; "raw" areas frequent along straight sections & bends; obvious bank aloughing; 80-100% of banks have erosion scars on sideslopes.
. score:	10		9-10	6-8	3-5	0-2
		Left Side	10	Average:		
		Right Side	2.0	Comments:		
		- W. D. S. S. S.	10			
Protection bank) 1 scores for & weeds hold s	k Vegetation in (score each NOTE: reduce r annual crops which do not oil well (e.g. (pweed).	covered by s vegetative d	the streambank surfaces stabilizing vegetation; isruption minimal or not ost all plants allowed to lity.	10-90% of the streambank surfaces covered by vegetation; disruption evident, but not affecting full plant growth potential to any great extent; more than one-half of potential plant height evident.	50-70% of the streambank surfaces covered in vegetation; disruption obvious; patches of bare and or closely cropped vegetation common; less than one-half of potential plant height remaining.	Less than 50% of the streambank surfaces covered by vegetation; extensive disruption of vegetation; vegetation removed to 2 inches or less.
score:	10		9-10	6-8	3-5	0-2
		Left Side	10	0.001.722.83		1-11-1
_		11000		Comments:		
		Right Side	10	Comments		
	ed Zone Width each side)	Width of veg	etated zone > 100 feet.	Width of vegetated zone 30-100 feet.	Width of vegetated zone 10-30 feet.	Width of vegetated zone < 10 feet.
score:	70		9-10	64	3-5	0-2
		Left Side	10			
				Average: Comments:		
		Right Side	10			
OTAL	SCORE:			Score compared to	maximum possibl	e:

Waterbody Name Tlab Otto				Trip ID: 2005 DEBMO Date: 729/429
	Visit# 2	Co Location	County Lewis + Clark	Colosco
It/Long obtained by metho	Long dother than GPS? Y N	Verified? ☐ By	by map v	GPS Datum (Circle One): (NAD 27 NAD 83 WGS84 what is the man scale?)
Samples Taken:		Samula	Samula ID/Rite I annie	11
Ø	Nutrients Metals Commons M		\$33CD	Sample Collection Procedure
7		100		SED-1
-	Macroinvertebrate Habitat Asmt.		03-0593M	KICK HESS OTHER-
Algae/Macrophytes C	Aquatic Plant Form	60	o 5-ptasA	PERCI OTHER:
9 [53.0535.0	CHIPHI.3 OTHED.
ssessment	Stream Reach Asmt. Other			Discount
Substrate	Pebble Count % Fines			Cil. M. Booking
Transect				
Photographs				
Field Notes				
Other				
Measurements: Time:	: 13-30	Macroinvertabosts Flot Passes	r	
Q / Flow (cfs)	Est	Site Visit Commenter	Nick Dumbon: 15 /W.A	Kick Length (R.): GO
Temp: (C) W /	17.68 A	MIII 100 100 100 100 100 100 100 100 100	mo.	
pH:	4.32			
SC: (mS/cm)	F3			
SC x 1000 =	umbo/cm			
DO: (mg/L)	· 9,14 ar.g.			
Slight	Turbid Opaque			
Turbidity Comments: //	5.0/ 8 h.0			
		31		

		124/03 Tet Cres	B/w Mi	Word Colony	03-0823 Station ID:	MIR Flat Cos
		Trif Shal				
	"Distance from initial point	**Depth	"Velocity (at point)	**Width	"Area	"Discharge
1	@ 3.0183	Ø	ø			
2	4.=	0,30	0,43			
3	5,0	0.38	3.94			
4	6.0	0.32	1,25			
5	7.0	0.48	1.44			
6	8.0	0.50	1.73			
7	9.0	5.GI	218			
В	100	0.63	256			
9	11.0	0,68	1.75			
10	120	0,80	1,54			
11	13.0	0.78	1.88			
12	14.0	1.00	1.85			
13	15.0	1:12	1.73			
14	160	1.25	0,40			
15	16,5 PEU	8,20	0			
16						-
17						
18		-				
19						
20					-	
21						
2	-					
23						
4						
5						
16						
7						
8						
9	-					
0						

MACROINVERTER	BRATE HABITAT ASSESSM	ENT FIELD FORM	RIFFLE	URUN PREVALENCE
Date: 7/2	14/03	Site Visit Code	03-0923	
Vaterbody:	- Flat Circle	olu Milled	Site: MIZELOA	CDS
Personnel:	had I Ting			
HABITAT				
PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
tA. Riffle Development	Well-developed riffle; riffle as wide as stream & extends two times width of stream.	Riffle 2s wide as stream but length less than two times width.	Reduced riffle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
A. score:	5-10	64 875	3-5	0-2
Comments:		The state of the s		
18. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent.	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravel, sand, silt, or bedrock substrate.
B, score:	9-10	47	3-5	0-2
Comments:				
2. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 6.35 mm [.25*]).	Gravel, cobble, or boulder particles are between 25-50 % surrounded by fine sediment.	Gravel, cobble, or boulder particles are between 50-75% surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
score:	16:20 /6	11-15	E-10	0-5
Comments:				
Channel Alteration (channelization, straightening, dredging, other alterations)	Channel alterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past affections (before past 20 years) may be resent, but more recent channel affection is not present.	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gabins or exmant; over, 80% of the stream reach channelized & disrupted,
scoret	16-20 /9	11-15	6-10	0.5
Comments:				
4. Sediment Deposition	Little or no enlargement of tises & less than 5% of the bottom affected by sadiment deposition.	Some new increase in bar formation, mostly from coarse gravet; 5- 30% of the bottom affected; slight deposalion in pools.	Moderate deposition of new gravel, coarse sand on old & new bars; 38- 50% of the bottom affected; sediment decised; sediment constrictions, & bends; moderate deposition in pools prevalent.	Heavy deposits of fine material, increased bar development more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
score:	16-20	11.15 12	5-10	0-5
Comments:				

5. Channel Flow Status	Water fills, baseflow channel; minima amount of channel substrate exposed.	Water fills > 75% of the taxsellow channel; < 25% channel substrate exposed.	Water fills 25-73% of the baseflow channel; riffle substrates mostly exposed.	Very little water in channel, & mostly present as standing pools.
score:	16-20 /%	11-15	6-10	0-5
Comments:				
	Banks stable; no evidence of ercalon	Interession of the contract of	Tar. a Constitution of the	
6. Bank Stability (score each bank) NOTE: Determine left or right side while facing downstream.	Banks statile; no evidence of enturing or bank faller; little apparent potential for future problems.	necessary states infrequent, small areas of ecosion mostly healed over.	Moderately unstable; moderate frequency & size of erosional areas; up to 50% of banks in reach have erosion; high erosion potential during high flow.	Unstable; many eroded areas, "raw" areas frequent along straight sections & bends; obvious bank sloughing; 60-100% of banks have erosion scars on sideskopes.
score:	9-10	5-8	3-5	0-2
	Left Side	700	7	
		Average: Comments:	1	
	Right Side	Comments.		
	Over 90% of the streambank surfaces	70.90% of the	50-70% of the	Less than 50% of the
T. Bank Vegetation Protection (score each bank) NOTE: reduce scores for annual crops & weeds which do not hold soil well (e.g. knapweed).	covered by stabilizing vegetation; vegetative disruption minimal or not evident; almost all plants allowed to grow naturally.	streambank surfaces covered by vegetation; diaruption evident, but not affecting full plant growth potential to any great extent; more than	streamhank surfaces covered in vegetation, disruption obvious; patches of bare soil or closely sropped vegetation common; less than one-half of potential plant height remaining.	streambank surfaces covered by vegetation; extensive disruption of vegetation; vegetation removed to 2 inches or less.
scorec	9-10	6-8	3-5	0-2
	Left Side (7		-	
	Len Side	Average:	8.5	
	Right Side	Comments:		
	P			
L Vegetated Zone Width (score each side)	Width of vegetated zone > 100 feet.	Width of vegetated zone 30-100 feet,	Width of vegetated zone 10-30 feet.	Width of vegetated zone < 10 feet.
score:	9-10	6-8	3-5	0-2
	Left Side 2		0	
	Left Side	Average:	7	
	Right Side	Comments:		
OTAL SCORE:		Score compared to	maximum possibl	e:

				(Orec Station per page)	Trip ID: 3005-0RP EN Date: 7-2 05 Personnel: Agrid and 1800 on the
Station ID MIZE OF VIS	Hotel	Waterbody Name That Ore E Station ID MZF04C0C Visit # 3	Location	600.5 4 C	01/c 100/30/02
u/Long obtained by	y metho	od other than GPS? Y N	V If Y who	Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map scale?	GPS Datum (Circle One): (NAD 27 NAD 83 WGS84 what is the map scale?
Samples Taken:				Samula IDditto I and	1 -
Water		Nutrients Metals Commons M	Imons [8]	O 2 O C S S S S S S S S S S S S S S S S S S	Sample Collection Procedure
Sediment				2000	GRAB
Macroinvertebrate		☐ Macroinvertebrate Habitat Asmt ☐			SED-1
Algae/Macrophytes		Aquatic Plant Form			KICK HESS OTHER:
Chlorophyll a				130000	PERI-1 OTHER:
Habitat Assessment		Stream Beach Acres		000000000000000000000000000000000000000	CHLPHL-2 OTHER:
Substrate		Pebble Count % Finac	2		Purpose: TMIX
Transect					
Photographs					
Field Notes					
Other					
Measurements:	Time:	s 16 45	Macroiny	Macroinvertehrate Kick Danaston	
Q / Flow (cfs)		Est	Site Viel	Site Vieit Community	Kick Length (Pt.): W A
Temp: (C)	W	70 A	200	Comments	
pH:	60	46			
SC: (mS/cm)		363			
SC x 1000 =		umholom		,	
DO: (mg/L)	3	1950 495			
R: Clear Sig	Cht C	TUR: Clear Slight Turbid Consume			
Turbidity Comments:	Y.	AS Wall			
	158	N/O			
				A STATE OF THE PARTY OF THE PAR	
			(3)		

Wa	terbody: Fla	+ Creek	Duecsino		Station ID:	MINFIATOR
Per	rsonnel: IA	dlaw.	Bournan			
fii	Distance from Initial point	**Depth	**Velocity (at point)	**Width	"Area	"Discharge
1		.00	0			
2	2	,32	,60			
3	3	, 60	1.65	1		
4	L.	1.15	1.60			
5	5	1.50	1.25			
6	6	150	1.98	11		
7	7	1.45	2.50	1		
8	8	1.50	305			
9	9	1.40	3.01	1		
10	10	1.40	3.12	1		
11	11	1.40	2.68	1		
12	12 .	1.35	3.18	1		
13	13	1.4	2.38	J.		
14	14	1,4	2.8			
15	16	1.4	2.60	1		
16	16	1.35	274	1		
17	17	1,3	2.44	1		
18	19	1,3	231	1		
19	19	1.3	1.32	1		
20	7.0	0.9	1.12	1		
21	21.0	0.6	. 60	1		
22						
3						
4						
5						
6						
7						
8			14		410	
9						
0						

21.1.1.12				/
MACROINVERTE	BRATE HABITAT ASSESSA	MENT FIELD FORM	RIFFL	E/RUN PREVALENCE
Date: 7-24	-03	Site Visit Code	. 03-0805	(0)
Waterbody: 12	burg Kyr above F	C. diversion		
Personnel: Sad	Itona	- LIVETZ IBA	Older TYTE CK F/L	CI LAIG
HABITAT PARAMETER	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1A. Riffle Development	Well-developed nifle; nifle as wide as stream & extends two times width of stream.	Riffle as wide as stream but length less than two times width.	Reduced riffle area that is not as wide as stream & its length less than two times width.	Riffles virtually non- existent
A. scare:	2-10 /0	н	3-5	0-2
Comments:				
18. Benthic Substrate	Diverse substrate dominated by cobble.	Substrate diverse with abundant cobble, but bedrock, boulders, fine gravel, or sand prevalent	Substrate dominated by bedrock, boulders, sand, or silt; cobble present.	Monotonous fine gravet, sand, silt, or bedrock substrate,
1B. score:	9-10 /0	6-8	3-5	0-2
Comments:				
2. Embeddedness	Gravel, cobble, or boulder particles are between 0-25% surrounded by fine sediment (particles less than 6.35 mm (.25")).	Gravel, cobble, or boulder particles are between 25-50 % aurrounded by fine sediment.	Gravet, cobble, or boulder particles are between 50-75%, surrounded by fine sediment.	Gravel, cobble, or boulder particles are over 75% surrounded by fine sediment.
score	16-20 20	11-15	6-10	0-5
Comments:				
Channel Alteration (channelization, traightening, dredging, other alterations)	Channel siterations absent or minimal; stream pattern apparently in natural state.	Some channelization present, usually in areas of crossings, etc. Evidence of past alterations (before pag 20 years) may be resent, but more recent channel alteration is not present.	New embankments present on both banks; 40-80% of the stream reach channelized & disrupted.	Banks shored with gablon or coment; over 50% of the stream reach channelized & disrupted.
score:	16-20 /9	11-15	6-10	
Comments:	No. of the last of		8-10	0-5
	Little or no entargement of bars &	Some new increase in		
	less than 5% of the bottom affected by sediment deposition.	har formation, mostly from coarse gravel; 5- 10% of the bottom affected; slight deposition in pools.	new gravel, coarse sand on old & new bars; 30- 58% of the bottom affected; sediment deposits at ebstructions, constrictions, & bends;	heavy deposits of line material, increased bar development more than 90% of the bottoes changing frequently; pools almost absent the to substantial sediment deposition.
score:	18-20 /9	11-15	6-10	0-5
Comments:				

5, Channel Flow Status	Water fills baseflow channel; minimal amount of channel substrate exposed.	Water filts > 75% of the baseflow channel; < 25% channel substrate exposed.	Water fills 25-75% of the baseflow channel; riffle substrates mostly exposed.	Very Sittle water in channel, & mostly present as standing pools.
score:	16-20 /%	11-15	6-10	0-5
Comments:	1 0	100	-1 /	1 100
Commence		a cobble expa	red on expo	- NET BAD
6. Bank Stability (score each bank) NOTE: Determine left or right side white facing downstream.	Banks stable; no evidence of ension or bank failure; little apparent potential for future problems.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable? moderate frequency & size of erosional areas; up to 60% of banks in reach have erosion; high erosion potential during high flow.	Unstable; many eroded areas, "raw" areas frequent along straight sections & bends; obvious bank sloughing; 60-100% of banks have erosion scars on sideslopes.
score:	9-10	64	3-5	0-2
	Laft Side (7)		9	
		Average: Comments	/	
	Right Side O			
Bank Vegetation Protection (score each bank) NOTE; reduce scores for annual crops & weeds which do not hold soil well (e.g. knapweed).	Over 90% of the streambank surfaces covered by stabilizing vegetation; vegetative disruption minimal or not evident; almost all plants allowed to grow naturally.	streambenk surfaces covered by vegetation; diaruption evident, but not affecting full plant growth potential to any great extent; more than	50-70% of the streambank surfaces covered in vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of potential plant height remaining.	
, score!	5-10	6-8	3-4	0-2
	Left Side 9	02.1744.00	9	
	8	Comments:	-	
	Right Side 7			
E. Vegetated Zone Width (score each side)	Width of vegetated zone > 100 feet.	Width of vegetated zone 30-100 feet.	Width of vegetated zone 10-38 feet.	Width of vegetated zone < 10 feet.
L score:	9-10	6-8	3-5	0-2
	Left Side 9		9	
		Average: Comments:	-/	
(7)	Right Side			
TOTAL SCORE:		Score compared t	o maximum possib	le:
	*			

Waterbody Name Flat Creek Station ID VN12 Flat Co3				(One Station per page)	Personnel: Landlan I bonner
	1-1- (-7	Visit# 2	Cocation	Location Flot Cook End	HUC 106.301 63
Lat/Long obtained by	y met	Long	Ve If Y what	Lat/Long obtained by method other than GPS? Y N If Y what method used? If by map what is the map seale?	GPS Datum (Circle One): (NAD 27 NAD 83 WGS84 what is the map scale?
Samples Taken:				Sample ID/File Location:	
Water	Ø	Nutrients Metals Commons	-	63-082613	GRAB GRAB
Macroinvertebrate		Macroinvertebrate Habitat Acms	C		SED-1
Algae/Macrophytes	-	Aquatic Plant Form			#1
Chlorophyll a	凶			03-08740	PERI-1 OTHER:
Habitat Assessment		Stream Reach Asmt. Other	_		
Substrate	1000	☐ Pebble Count ☐ % Fines ☐			Purpose: //////
Transect					
Photographs					
Field Notes					
Other					
Measurements:	Time:	18-00	Macroinve	Macroinverteheate Kick Durasion	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Q / Flow (cfs)		Est.	Site Vicit		Nick Length (Ft.):
Temp: (C)	W			Commission	
pH:	7	550			
SC: (mS/cm)		259			
SC x 1000 =		mpho/cm			
DO: (mg/L)		9.51 mt / 94.6 to			
TUR: Clear Si	ght	TUR; Clear Slight Turbid Oppone			
Turbidity Comments:	3.6	59			
	10	3.44 NTU			
					+

	Date: Waterbody:	7-24-03 Flat Crack			03-0826 Station ID:	MIZFIATCO7
	Personnel:		Bourson			
	"Distance fro	· Depth	"Velocity (at point)	:"Width	"Area	**Discharge
1		1.0	.09			
2	0	1.2	,67			
3	3	1.2	1.84			
4	4	1.3	2.10			
5	3	1.3	2.03			
6	6	1.0	2.30			
7	7	0,9	2.45			
8	8	1.0	2.95			
9	9	0.9	2.27			
10	7/0	1.2	2.70			
11	11	1.20	3.15			
12	12	1.2	3.17			
3	13	1.2	8.48			
4		0.9	0.61			
5	15	0.65	0.05			
6	10	0.62	1.37			T.
7	18	0,65	1.67			
8	19	0,45	0			
9	- 13	100				
1						
2						
3						
4						
5						
3						
,	0.0					
1						
100						

Waterbody Name Station ID Magaza		(One Station per page)	Trip ID: S003-D2 B2 Date:
	Visit#	County Louis + Clouk	2010
/Long obtained by me	thod other than GPS? Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Lat/Long obtained by method other than GPS? Y N If Y what method used? If by man what is the man seed of	GPS Datum (Circle One): (NAD 27) NAD 83 WGS84
Samples Taken:		The same of the sa	acate)
Water	Nutrients Metals Commons	Sample LIVElle Location:	Sample Collection Procedure
Sediment			GKAB
Macroinvertebrate	Macroinvertebrate Habitat Asmt	ha his on on	SED-1
Algae/Macrophytes 3	_	100	KICK, HESS OTHER:
Chlorophyll a		03-03-04 63 083-0	/PERI-1 OTHER:
Habitat Assessment	Stream Reach Asses	201000000	CHLPHL-2 OTHER:
Substrate	Pebble Count & Elman		Purpose: [MD]
Transect	com a management		
Photographs			
Field Notes			
Other			
Measurements: Tir	Time: 16 00		
Q/Flow (cfs)	Est	Site Vici Comments	Kick Length (Ft.):
Temp: (C) W	81 9% A	rish Comments:	
pH:	C. 40		
SC: (mS/cm)	.435		
SC x 1000 =	Hmholem		
DO: (mg/L)	The Sharet Change		
R: Clear Slight F	d T One		
Turbidity Comments: 4	. 98 APRI)		
0	146		
		AND THE RESERVE OF THE PARTY OF	

		100	Blow Budh	Adult	Gianon ib.	MILFLATCO8
	Personnel:	aidlaw	Bowersers			
	"Distance from initial point	**Depth	"Velocity (at point)	"Width	**Area	**Discharge
1	2	140	, 03	D		
2	35	. 65	.16	1.5		
3	5.0	1.0	121	1.5		
4	6.5	1.15	. 2.6	1.5		
5	0.8	1.0	.26	1.5		
6	9.5	1.05	.35	1.5		
7	11.0	1.22	15	1.5		
8	18.5	1.32	.34	1.5		
9	14.0	1.95	, 29	1.5		
10	15.5	1.40	.17	1.5		
11	17.0	1.45	.19	1.5		
12	18.5	1.45	.23	1.5		
13	10.0	1.57	,02	1.5		
14	21.5	1.5	,03	1.5		
15	D3.0	1.32	0	1.5		
6	24.5	.98	0	1.5		
17	24.0	.48	0	15		
в	27.3	0	D			
9						
0						
1						
2						
3						
4						
5						
6						
7						
8		1				
9						
0						

M12FLATC06	Date-	6/18/2003	17:20
Flat Creek, Diversion from the Dearborn River			

Geomorphology Data				
parameter	value	units		
Bankfull Width		Ft		
Mean Depth		Ft		
Bnkfull X-sect area		Sq Ft		
Width/Depth				
Max Depth		Ft		
Flood prone width		Ft		
Entrenchement Ratio				
Water slope				
Channel Sinuosity				
BEHI Index Score (adjusted)				
BEHI Rating				
Channel D50		mm		
Percentage of Fines (<2mm)		%		
Stream Type				
Discharge	76.22	cfs		

Stream Reach Habitat Assessments				
Parameter	Value	Units		
Stream Reach Assessment Score (NRCS)		%		
Stream Reach Assessment Score (MT adjusted)		%		
Macroinvertabrate Habitat Assessment Score		%		
OVERALL SITE RATINGS				
Stream Reach Assessment Score (NRCS)				
Stream Reach Assessment Score (MT adjusted)				
Macroinvertabrate Habitat Assessment Score				

Field Measurements of water chemistry						
parameter value units						
Flow	76.22	cfs				
Temperature, water	13.12	degree C				
рН	8.43					
Specific Conductance	0.227	mS/cm				
Dissolved Oxygen	9.47	mg/L				
Dissolved Oxygen, % Saturation	90	%				
Turbidity	1	NTU				

Lab Results from Field Samples				
parameter	value	units	RL	
Total Suspended Solids, TSS	ND	mg/L	10	
Volatile Suspended Solids, VSS	ND	mg/L	10	
TSS-VSS	ND	mg/L	10	
Water Column Chlorophyll a	2.	1 mg/m^3	0.1	
Benthic Chlorophyll a	30.	7 mg/m^3	0.1	
Total Phosphorus, TP	0.009	mg/L	0.004	
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5	
Nitrate + Nitrite	ND	mg/L	0.01	
Total Nitrogen, TN		ma/L		

M12FLATC02	Date-	6/18/2003	20:30
Flat Creek on Flat Creek Rd, just above Culvert			

Geomorphology Data				
parameter	value	units		
Bankfull Width		Ft		
Mean Depth		Ft		
Bnkfull X-sect area		Sq Ft		
Width/Depth				
Max Depth		Ft		
Flood prone width		Ft		
Entrenchement Ratio				
Water slope				
Channel Sinuosity				
BEHI Index Score (adjusted)				
BEHI Rating				
Channel D50		mm		
Percentage of Fines (<2mm)		%		
Stream Type				
Discharge		cfs		

Stream Reach Habitat Assessments					
Parameter	Value	Units			
Stream Reach Assessment Score (NRCS)		%			
Stream Reach Assessment Score (MT adjusted)		%			
Macroinvertabrate Habitat Assessment Score		%			
OVERALL SITE RATINGS					
Stream Reach Assessment Score (NRCS)					
Stream Reach Assessment Score (MT adjusted)					
Macroinvertabrate Habitat Assessment Score					

Field Measurements of water chemistry						
parameter value units						
Flow		cfs				
Temperature, water		degree C				
рН						
Specific Conductance		mS/cm				
Dissolved Oxygen		mg/L				
Dissolved Oxygen, % Saturation		%				
Turbidity	7.29	NTU				

Lab Results from Field Samples				
parameter	value	units	RL	
Total Suspended Solids, TSS	ND	mg/L	1	
Volatile Suspended Solids, VSS	ND	mg/L	1	
TSS-VSS	ND	mg/L	1	
Water Column Chlorophyll a	ND	mg/m^3	0.	
Benthic Chlorophyll a	8.3	mg/m^3	0.	
Total Phosphorus, TP	ND	mg/L	0.00	
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.	
Nitrate + Nitrite	ND	mg/L	0.0	
Total Nitrogen, TN		mg/L		

200 Final Report

10 10 10 0.1 0.1 0.004

0.5 0.01

M12FLATC05	Date-	6/18/200
lat Creek DS of Milford Colony		
Geomorphology D	ata	
parameter	value	units
Bankfull Width		Ft
Mean Depth		Ft
Bnkfull X-sect area		Sq Ft
Width/Depth Max Depth		Ft
Flood prone width		Ft
Entrenchement Ratio		
Water slope		
Channel Sinuosity		
BEHI Index Score (adjusted)		
BEHI Rating	07	
Channel D50 Percentage of Fines (<2mm)	13.16	mm o/
Stream Type	13.10	70
Discharge	30.84	cfs
Stream Reach Habitat As	sessments	3
Parameter	Value	Units
Stream Reach Assessment Score (NRCS)		%
Stream Reach Assessment Score (MT adjusted)		%
Macroinvertabrate Habitat Assessment Score OVERALL SITE RATII	100	%
Stream Reach Assessment Score (MT adjusted) Macroinvertabrate Habitat Assessment Score Field Measurements of wat	er chemist	ry
parameter		•
-	value	units
-low	30.84	cfs
Temperature, water	30.84 21.96	cfs degree C
Femperature, water oH	30.84 21.96 8.69	cfs degree C
Femperature, water oH Specific Conductance	30.84 21.96 8.69 0.29	cfs degree C mS/cm
Femperature, water DH Specific Conductance Dissolved Oxygen	30.84 21.96 8.69 0.29 9.06	cfs degree C mS/cm mg/L
emperature, water H pecific Conductance issolved Oxygen issolved Oxygen, % Saturation	30.84 21.96 8.69 0.29 9.06 103.6	cfs degree C mS/cm mg/L %
emperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	30.84 21.96 8.69 0.29 9.06 103.6	cfs degree C mS/cm mg/L
emperature, water H Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity	30.84 21.96 8.69 0.29 9.06 103.6	cfs degree C mS/cm mg/L %
Flow Temperature, water oh DH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field	30.84 21.96 8.69 0.29 9.06 103.6 10.8	cfs degree C mS/cm mg/L % NTU
emperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter	30.84 21.96 8.69 0.29 9.06 103.6 10.8	cfs degree C mS/cm mg/L % NTU
Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value	cfs degree C mS/cm mg/L % NTU units mg/L
Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS //olatile Suspended Solids, VSS	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value ND	cfs degree C mS/cm mg/L % NTU units mg/L mg/L
Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value	cfs degree C mS/cm mg/L % NTU units mg/L
Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value ND	cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/M mg/M mg/M mg/M mg/M mg/M mg/M mg/M
Femperature, water SH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS //olatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value ND ND ND ND	cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/M mg/M mg/M mg/M mg/M mg/M mg/M mg/M
Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS //olatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Senthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value ND ND ND ND 31 0.012 ND	cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/m/3 mg/m/3 mg/L mg/L mg/L
Gemperature, water DH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS //olatile Suspended Solids, VSS FSS-VSS //water Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN Nitrate + Nitrite	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value ND ND ND ND ND ND ND 0.012	cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m/3 mg/m/3 mg/m/3 mg/L
emperature, water H ipecific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Folatile Suspended Solids, VSS FOR SS-VSS Vater Column Chlorophyll a Joenthic Chlorophyll	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value ND ND ND ND 31 0.012 ND	cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/m/3 mg/m/3 mg/L mg/L mg/L
emperature, water H pecific Conductance issolved Oxygen issolved Oxygen, % Saturation urbidity Lab Results from Field parameter otal Suspended Solids, TSS olatile Suspended Solids, VSS SS-VSS Vater Column Chlorophyll a enthic Chlorophyll a otal Phosphorus, TP otal Kiejdahl Notrogen, TKN itrate + Nitrite	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples value ND ND ND ND 31 0.012 ND	cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/M^3 mg/M^3 mg/L mg/L mg/L mg/L mg/L
emperature, water H pecific Conductance issolved Oxygen issolved Oxygen, % Saturation urbidity Lab Results from Field parameter otal Suspended Solids, TSS olatile Suspended Solids, VSS SS-VSS Vater Column Chlorophyll a enthic Chlorophyll a otal Phosphorus, TP otal Kiejdahl Notrogen, TKN itrate + Nitrite	30.84 21.96 8.69 0.29 9.06 103.6 10.8 Samples Value ND	cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/M^3 mg/M^3 mg/L mg/L mg/L mg/L mg/L

Final Report 201

value

units

44 %

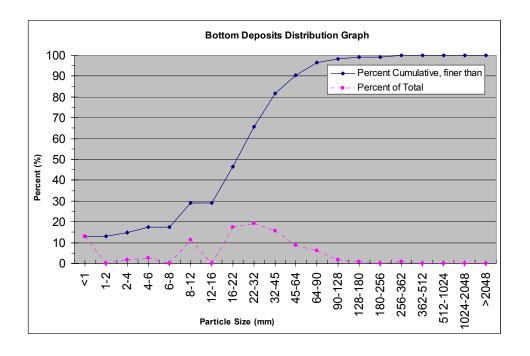
MODERATE IMPAIRMENT

PARTIAL SUPPORT

parameter

TOTAL SCORE (max =18)
PERCENT OF MAX SCORE
IMPAIRMENT CLASSIFICATION
USE SUPPORT

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	15	13.16	13.16
S	1.5	1-2		0.00	13.16
FG	3	2-4	2	1.75	14.91
FG		4-6	3	2.63	17.54
FG		6-8		0.00	17.54
MG		8-12	13	11.40	28.95
MG	14	12-16		0.00	28.95
CG		16-22	20	17.54	46.49
CG	27	22-32	22	19.30	65.79
CG	38.5	32-45	18	15.79	81.58
CG	54.5	45-64	10	8.77	90.35
SC	77	64-90	7	6.14	96.49
SC	109	90-128	2	1.75	98.25
MC	154	128-180	1	0.88	99.12
LC	218	180-256		0.00	99.12
LC		256-362	1	0.88	100.00
SB	437	362-512		0.00	100.00
MB	768	512-1024		0.00	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	114	100.00	100.00
		D50 particle size (mm)	22-32		
		% Fines (<2mm)	13.16		
M12FLATC05	Date-	6/18/2003	17	7:00	
Flat Creek DS of Milford C					



M12FLATC08	Date-	6/18/2003	13:30
Flat Creek below Birdtail Rd on Dearborn Rancl	n		
•			

Geomorphology Data			
parameter	value	units	
Bankfull Width	33.00	Ft	
Mean Depth	3.67	Ft	
Bnkfull X-sect area	120.96	Sq Ft	
Width/Depth	9.00		
Max Depth	5.49	Ft	
Flood prone width	100.00	Ft	
Entrenchement Ratio	3.03		
Water slope	0.0017		
Channel Sinuosity	2.59		
BEHI Index Score (adjusted)	29.00		
BEHI Rating	M	oderate	
Channel D50	10	mm	
Percentage of Fines (<2mm)	15.79	%	
Stream Type			
Discharge	17.35	cfs	

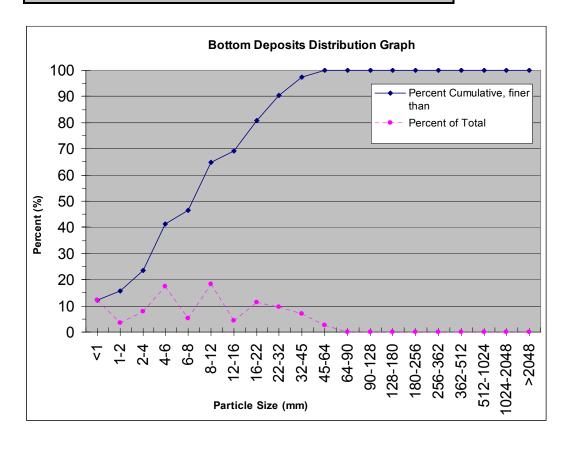
Stream Reach Habitat Assessments				
Parameter	Value	Units		
Stream Reach Assessment Score (NRCS)	94.8	%		
Stream Reach Assessment Score (MT adjusted)	94.1	%		
Macroinvertabrate Habitat Assessment Score		%		
OVERALL SITE RATIN	IGS			
Stream Reach Assessment Score (NRCS) Non Impaired, Ful Supporting				
Stream Reach Assessment Score (MT adjusted)				
Stream Reach Assessment Score (IVIT adjusted)				

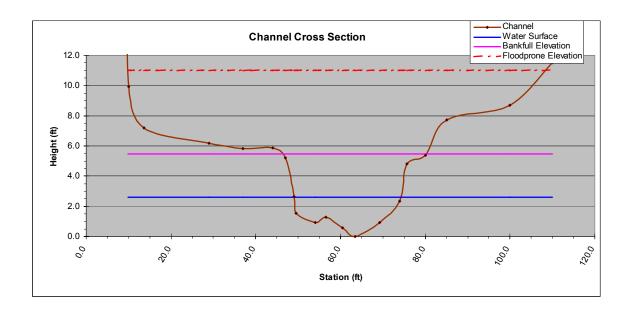
Field Measurements of water chemistry					
parameter value units					
Flow	17.35	cfs			
Temperature, water	21.51	degree C			
pH	8.44				
Specific Conductance	0.477	mS/cm			
Dissolved Oxygen	11.3	mg/L			
Dissolved Oxygen, % Saturation	126.6	%			
Turbidity	7.39	NTU			

Lab Results from Field Samples			
parameter	value	units	RL
Total Suspended Solids, TSS	ND	mg/L	10
Volatile Suspended Solids, VSS	ND	mg/L	10
TSS-VSS	ND	mg/L	10
Water Column Chlorophyll a	0.9	mg/m^3	0.1
Benthic Chlorophyll a	12.9	mg/m^3	0.1
Total Phosphorus, TP	0.061	mg/L	0.004
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5
Nitrate + Nitrite	ND	mg/L	0.01
Total Nitrogen, TN		mg/L	

Macroinvertabrate Data Results				
parameter	value	units		
TOTAL SCORE (max =18)	6	score		
PERCENT OF MAX SCORE	33	%		
IMPAIRMENT CLASSIFICATION	MODERATE	IMPAIRMENT		
USE SUPPORT	PARTIAL SI	JPPORT		

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	14	12.28	12.28
S	1.5	1-2	4	3.51	15.79
FG	3	2-4	9	7.89	23.68
FG	5	4-6	20	17.54	41.23
FG	7	6-8	6	5.26	46.49
MG	10	8-12	21	18.42	64.91
MG	14	12-16	5	4.39	69.30
CG	18	16-22	13	11.40	80.70
CG		22-32	11	9.65	90.35
CG		32-45	8	7.02	97.37
CG	54.5	45-64	3	2.63	100.00
SC	77	64-90		0.00	100.00
SC		90-128		0.00	100.00
MC	154	128-180		0.00	100.00
LC	218	180-256		0.00	100.00
LC	309	256-362		0.00	100.00
SB	437	362-512		0.00	100.00
MB	768	512-1024		0.00	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	114	100.00	100.00
		D50 particle size (mm)	8-12		
		% Fines (<2mm)	15.79		
M12FLATC08	Date-	6/18/2003	1	3:30	
Flat Creek below Birdtai					





	BEHI Field M	easures		BEHI Calculated Values		es
	Parameter	Value	Units	Parameter	Value	Units
_	Rod reading @ Upstream Edge			Slope	0.0017	
ongitudinal Information	of Water	12.03	feet	Sinuousity	2.59	
tud	Rod reading @ Downstream			Max Depth	5.49	feet
igi orn	Edge of Water	14.25	feet	Floodprone Height	10.97	feet
o ji	Stream Distance	1340.00	feet	Mean Depth	3.67	feet
_	Straightline Distance	517.00	feet	Bankfull Width	33.00	feet
_	Left Edge of Bankfull	47.00	feet	Floodplrone Width	100.00	feet
Cross-Sectional Information	Right Edge of Bankfull	80.00	feet	Bankfull Area	120.96	ft^2
oss-Section Information	Rod reading @ Thalweg	16.62	feet	FloodproneArea		ft^2
Sec	Rod reading @ Bankfull Depth	11.13	feet	W/D Ratio	9.00	
for for	Rod reading @ Floodplain Depth	5.65	feet	Cross Sectional Area	120.96	ft^2
<u>ة</u> ج	Left Edge of Floodprone depth	10.00	feet	Entrenchment Ratio	3.03	
O	Right Edge of Floodprone depth	110.00	feet			
uo	Bank Height	11.00	feet			
atic	Bankfull Height	5.88	feet	Bank Ht/Bankfull Ht	1.87	
Ĕ	Root Depth	1.00	feet	Root Depth/Bank Ht	0.09	
آ <u>و</u>	Root Density	25.00		Root Density	25	%
=	Bank Angle	70.00	Degrees	Bank Angle	70	degrees
BEHI Information	Surface Protection	50.00	%	Surface Protection	50	%
_						
Stress	Velocity at thalweg	0.79	ft/sec	Velocity Gradient	0.06	ft/sec/ft
tre	Tape reading at thalweg	63.00		Near Bank stress / Mean		
atic	velocity at left bank		ft/sec	Shear stress		
ar Bank Stre Information	tape reading at left bank	49.00	feet	A nb / A		
Ä Ģ	Near bank stress					
Near In	Mean shear stress					
Ž	Near bank x-sectional area		ft^2			

BEHI Associated Index Value (from form)		Possible Adjustment Factors	
Bank Ht/Bankfull Ht	6.00	Bank Materials	
Root Depth/Bank Ht	8.00	Bedrock is always Very Low	
Root Density	6.00	Boulders are always Low	
Bank Angle	5.00	Cobble decrease the category by one unless the mixture	
Surface Protection	4.00	of Sand/Gravel is over 50%	
Total Index Value	29.0	Gravel- adjust the values up 5-10 pts depending on	
Numeric Adjustments:		sand composition	
Bank Materials Index adjustment:		Sand- adjust the values up 10 pts	
Bank Materials index adjustinent.		silt/clay- no adjustment	
		Stratification	
Bank Stratification Index adjustment:		5-10 pts upward depending on position of unstable	
Total adjusted Index Value:	29.0	layers relative to bankfull stage	
Bank Erosion Potential Rating:		Moderate	

Date-

6/18/2003

9:15

Geomorphol	ogy Data	
parameter	value	units
Bankfull Width		Ft
Mean Depth		Ft
Bnkfull X-sect area		Sq Ft
Width/Depth		
Max Depth		Ft
Flood prone width		Ft
Entrenchement Ratio		
Water slope		
Channel Sinuosity		
BEHI Index Score (adjusted)		
BEHI Rating		•
Channel D50	15	4 mm
Percentage of Fines (<2mm)	2.8	0 %
Stream Type		
Discharge	19.5	1 cfs

M12FLATC04

Flat Creek at confluence with Dearborn River on Dearborn Ranch

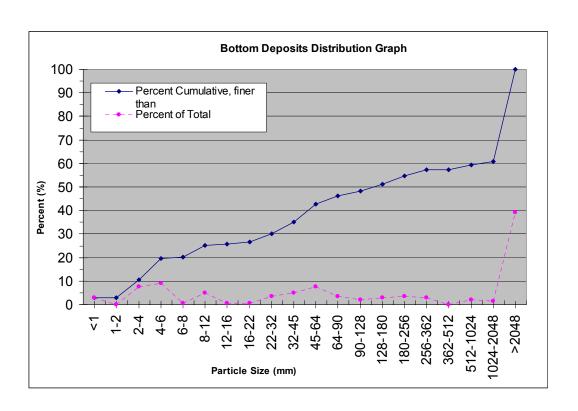
Stream Reach Habitat Assessments				
Parameter Parameter	Value	Units		
Stream Reach Assessment Score (NRCS)		%		
Stream Reach Assessment Score (MT adjusted)		%		
Macroinvertabrate Habitat Assessment Score		%		
OVERALL SITE RATIN	IGS			
Stream Reach Assessment Score (NRCS)				
Stream Reach Assessment Score (MT adjusted)				
Macroinvertabrate Habitat Assessment Score				

Field Measurements of water chemistry						
parameter value units						
Flow	19.51	cfs				
Temperature, water	18.51	degree C				
pH	8.37					
Specific Conductance	0.401	mS/cm				
Dissolved Oxygen	8.95	mg/L				
Dissolved Oxygen, % Saturation	95.7	%				
Turbidity		NTU				

Lab Results from Field Samples			
parameter	value	units	RL
Total Suspended Solids, TSS	ND	mg/L	10
Volatile Suspended Solids, VSS	ND	mg/L	10
TSS-VSS	ND	mg/L	10
Water Column Chlorophyll a	ND	mg/m^3	0.1
Benthic Chlorophyll a	16.6	mg/m^3	0.1
Total Phosphorus, TP	0.034	mg/L	0.004
Total Kiejdahl Notrogen, TKN	0.8	mg/L	0.5
Nitrate + Nitrite	ND	mg/L	0.01
Total Nitrogen, TN		mg/L	

Macroinvertabrate Data Results					
parameter	value	units			
TOTAL SCORE (max =18)	5	score			
PERCENT OF MAX SCORE	28	%			
IMPAIRMENT CLASSIFICATION	MODERATE	IMPAIRMENT			
USE SUPPORT	PARTIAL SI	JPPORT			

		Pebble Count Data					
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total		
S/C	0.5	<1	4	2.80	2.80		
S	1.5	1-2		0.00	2.80		
FG	3	2-4	11	7.69	10.49		
FG		4-6	13	9.09	19.58		
FG	7	6-8	1	0.70	20.28		
MG	10	8-12	7	4.90	25.17		
MG	14	12-16	1	0.70	25.87		
CG	18	16-22	1	0.70	26.57		
CG		22-32	5	3.50	30.07		
CG	38.5	32-45	7	4.90	34.97		
CG	54.5	45-64	11	7.69	42.66		
SC	77	64-90	5	3.50	46.15		
SC	109	90-128	3	2.10	48.25		
MC	154	128-180	4	2.80	51.05		
LC		180-256	5	3.50	54.55		
LC	309	256-362	4	2.80	57.34		
SB	437	362-512		0.00	57.34		
MB	768	512-1024	3	2.10	59.44		
LB	1536	1024-2048	2	1.40	60.84		
BR		>2048	56	39.16	100.00		
		TOTALS	143	100.00	100.00		
		D50 particle size (mm)	128-180				
		% Fines (<2mm)	2.80				
M12FLATC04	Date-	6/18/2003	9:15				
Flat Creek at confluence with Dearborn River on Dearborn Ranch							



M12FLATC06	Date-	7/24/2003	16:45
Flat Creek, Diversion from the Dearborn River			

Geomorphology Data				
parameter	value	units		
Bankfull Width		Ft		
Mean Depth		Ft		
Bnkfull X-sect area		Sq Ft		
Width/Depth				
Max Depth		Ft		
Flood prone width		Ft		
Entrenchement Ratio				
Water slope				
Channel Sinuosity				
BEHI Index Score (adjusted)				
BEHI Rating				
Channel D50		mm		
Percentage of Fines (<2mm)		%		
Stream Type				
Discharge	57.91	cfs		

Stream Reach Habitat Assessments					
Parameter	Value	Units			
Stream Reach Assessment Score (NRCS)		%			
Stream Reach Assessment Score (MT adjusted)		%			
Macroinvertabrate Habitat Assessment Score		%			
OVERALL SITE RATINGS					
Stream Reach Assessment Score (NRCS)					
Stream Reach Assessment Score (MT adjusted)					
Macroinvertabrate Habitat Assessment Score					

Field Measurements of water chemistry						
parameter value units						
Flow	57.91					
Temperature, water	14.7	degree C				
рН	8.46					
Specific Conductance	0.263	mS/cm				
Dissolved Oxygen	9.67	mg/L				
Dissolved Oxygen, % Saturation	95.4	%				
Turbidity	0.46	NTU				

Lab Results from Field Samples			
parameter	value	units	RL
Total Suspended Solids, TSS	ND	mg/L	10
Volatile Suspended Solids, VSS	ND	mg/L	10
TSS-VSS	ND	mg/L	10
Water Column Chlorophyll a	1.8	mg/m^3	0.1
Benthic Chlorophyll a	5.7	mg/m^3	0.1
Total Phosphorus, TP	ND	mg/L	0.004
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5
Nitrate + Nitrite	0.056	mg/L	0.01
Total Nitrogen, TN		mg/L	

Final Report 209

M12FLATC02	Date-	7/24/2003	18:00
Flat Creek on Flat Creek Rd, just above Culvert			

Geomorphology Data				
parameter	value	units		
Bankfull Width		Ft		
Mean Depth		Ft		
Bnkfull X-sect area		Sq Ft		
Width/Depth				
Max Depth		Ft		
Flood prone width		Ft		
Entrenchement Ratio				
Water slope				
Channel Sinuosity				
BEHI Index Score (adjusted)				
BEHI Rating				
Channel D50		mm		
Percentage of Fines (<2mm)		%		
Stream Type				
Discharge	34.47	cfs		

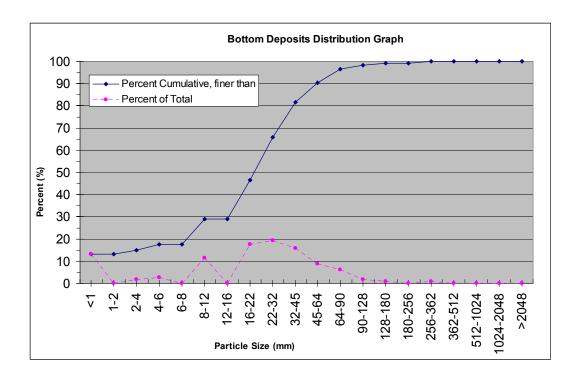
Stream Reach Habitat Assessments					
Parameter	Value	Units			
Stream Reach Assessment Score (NRCS)		%			
Stream Reach Assessment Score (MT adjusted)		%			
Macroinvertabrate Habitat Assessment Score		%			
OVERALL SITE RATINGS					
Stream Reach Assessment Score (NRCS)					
Stream Reach Assessment Score (MT adjusted)					
Macroinvertabrate Habitat Assessment Score					

Field Measurements of water chemistry						
parameter value units						
Flow	34.47					
Temperature, water	15.11	degree C				
рН	8.5					
Specific Conductance	0.259	mS/cm				
Dissolved Oxygen	9.51	mg/L				
Dissolved Oxygen, % Saturation	94.6	%				
Turbidity	3.55	NTU				

Lab Results from Field Samples				
parameter	value	units	RL	
Total Suspended Solids, TSS	ND	mg/L	10	
Volatile Suspended Solids, VSS	ND	mg/L	10	
TSS-VSS	ND	mg/L	10	
Water Column Chlorophyll a	3.6	mg/m^3	0.1	
Benthic Chlorophyll a	19.2	mg/m^3	0.1	
Total Phosphorus, TP	0.069	mg/L	0.004	
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5	
Nitrate + Nitrite	ND	mg/L	0.01	
Total Nitrogen, TN		mg/L		

M12FLATC05	Date-	7/24/200	3 13:
lat Creek DS of Milford Colony			
Geomorphology I			
parameter Bankfull Width	value	units Ft	
Bankfull Vviotn Mean Depth	-	Ft Ft	
Bnkfull X-sect area		Sq Ft	
Width/Depth		og i i	
Max Depth		Ft	
Flood prone width		Ft	
Entrenchement Ratio			
Water slope Channel Sinuosity	+		
BEHI Index Score (adjusted)			
BEHI Rating			
Channel D50	27	mm	
Percentage of Fines (<2mm)	13.16	%	
Stream Type	10.11		
Discharge	13.44	CTS	
Stream Reach Habitat As	sessments		
Parameter Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)		%	
Stream Reach Assessment Score (MT adjusted)		%	
Macroinvertabrate Habitat Assessment Score		%	
OVERALL SITE RATI	NGS		
Stream Reach Assessment Score (NRCS)			
			-
O4 D A			
Stream Reach Assessment Score (MT adjusted)			
			3 min
Macroinvertabrate Habitat Assessment Score			3 min 35'
Macroinvertabrate Habitat Assessment Score			
Macroinvertabrate Habitat Assessment Score Field Measurements of wa			
Macroinvertabrate Habitat Assessment Score Field Measurements of war	value	units	
Macroinvertabrate Habitat Assessment Score Field Measurements of war parameter	value 13.44	units cfs	
Macroinvertabrate Habitat Assessment Score Field Measurements of war parameter Flow Temperature, water	value 13.44 17.68	units cfs degree C	
Macroinvertabrate Habitat Assessment Score Field Measurements of wa	13.44 17.68 8.32	units cfs degree C	
Field Measurements of war parameter Flow Temperature, water	value 13.44 17.68 8.32 0.273	units cfs degree C	
Field Measurements of war parameter Flow Temperature, water oH Specific Conductance	13.44 17.68 8.32 0.273 9.14	units cfs degree C mS/cm mg/L	
Field Measurements of war parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	13.44 17.68 8.32 0.273 9.14	units cfs degree C mS/cm mg/L	
Field Measurements of war parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	13.44 17.68 8.32 0.273 9.14	units cfs degree C mS/cm mg/L	
Field Measurements of war parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity	value 13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L	
Field Measurements of war parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples	units cfs degree C mS/cm mg/L % NTU	35'
Field Measurements of war parameter Flow Temperature, water oh Beschic Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter	13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L % NTU	
Field Measurements of war parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS	13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L % NTU	35'
Field Measurements of war parameter Flow Temperature, water OH Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS	13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value	units cfs degree C mS/cm mg/L % NTU units mg/L	35' RL 10
Field Measurements of war parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value 14 ND 14 2.1	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L	35' RL 10 10 10 0.1
Field Measurements of war parameter Flow Femperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Flotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Nater Column Chlorophyll a Benthic Chlorophyll a	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value 14 ND 14 2.1 22.2	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/m^3 mg/m^3	35' RL 10 10 0.1 0.1 0.1
Field Measurements of war parameter Flow Temperature, water oh Beschied Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value 14 ND 14 2.1 22.2 0.069	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/m/3 mg/m^3 mg/L	35' RL 10 10 0.1 0.1 0.004
Field Measurements of war parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Furbidity Lab Results from Field parameter Fotal Suspended Solids, TSS Volatile Suspended Solids, VSS FSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Fotal Phosphorus, TP Fotal Kiejdahl Notrogen, TKN	value 13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m/3 mg/m/3 mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water oh Boesific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value 14 ND 14 2.1 22.2 0.069	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	35' RL 10 10 0.1 0.1 0.004
Field Measurements of war parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m/3 mg/m/3 mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water oh Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	RL 10 10 0.1 0.01 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water OH Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value 14 ND 14 2.1 22.2 0.069 0.6 ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	RL 10 10 0.1 0.01 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value 14 ND 14 2.1 22.2 0.069 0.6 ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water OH Dissolved Oxygen Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Bental Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter	value 13.44 17.68 8.32 0.273 9.14 96 10.45 Samples value 14 ND 14 22.1 0.069 0.6 ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water OH Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter TOTAL SCORE (max =18)	value 13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.1 0.004 0.5
Field Measurements of war parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 13.44 17.68 8.32 0.273 9.14 96 10.45	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	RL 10 10 0.1 0.01 0.1 0.004 0.5

		Pebble Count Data			
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total
S/C	0.5	<1	15	13.16	13.16
S	1.5	1-2		0.00	13.16
FG	3	2-4	2	1.75	14.91
FG	5	4-6	3	2.63	17.54
FG		6-8		0.00	17.54
MG	10	8-12	13	11.40	28.95
MG	14	12-16		0.00	28.95
CG		16-22	20	17.54	46.49
CG	27	22-32	22	19.30	65.79
CG		32-45	18		81.58
CG	54.5	45-64	10	8.77	90.35
SC		64-90	7	6.14	96.49
SC	109	90-128	2	1.75	98.25
MC		128-180	1	0.88	99.12
LC		180-256		0.00	99.12
LC		256-362	1	0.88	100.00
SB		362-512		0.00	100.00
MB	768	512-1024		0.00	100.00
LB	1536	1024-2048		0.00	100.00
BR		>2048		0.00	100.00
		TOTALS	114	100.00	100.00
		D50 particle size (mm)	22-32		
		% Fines (<2mm)	13.16		
	M12FLATC05	Date-	7/24/2003		13:30
	Flat Creek DS of Milford	Colony			



Date-

M12FLATC03

7/22/2003

9:45

Geomorph	nology Data	
parameter	value	units
Bankfull Width	23.00	Ft
Mean Depth	2.15	Ft
Bnkfull X-sect area	49.39	Sq Ft
Width/Depth	10.71	
Max Depth	3.15	Ft
Flood prone width	63.00	Ft
Entrenchement Ratio	2.74	
Water slope	0.0046	
Channel Sinuosity	1.23	
BEHI Index Score (adjusted)	30.10	
BEHI Rating	MDDE	RATE-HIGH
Channel D50	27	mm
Percentage of Fines (<2mm)	31.97	%
Stream Type	C4	borderline E4, just needs more sin
Discharge	13.42	cfs

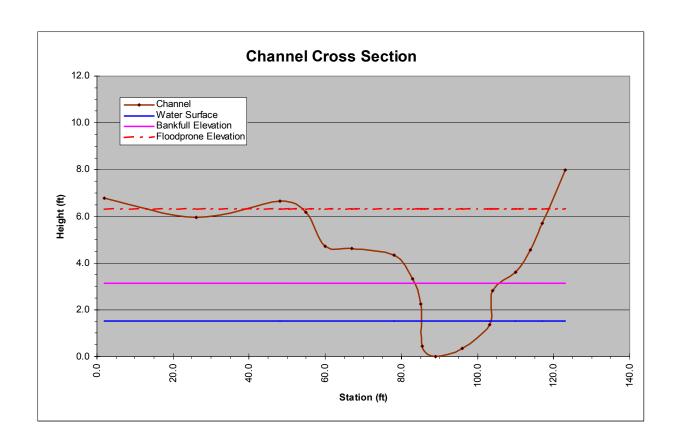
Stream Reach Habitat Assessments				
Parameter	Value	Units		
Stream Reach Assessment Score (NRCS)		%		
Stream Reach Assessment Score (MT adjusted)		%		
Macroinvertabrate Habitat Assessment Score		%		
OVERALL SITE RATIN	IGS			
Stream Reach Assessment Score (NRCS)				
Stream Reach Assessment Score (MT adjusted)				
Macroinvertabrate Habitat Assessment Score			1 3	

Field Measurements of water chemistry					
parameter value units					
Flow	13.42				
Temperature, water	18.32	degree C			
pH	8.01				
Specific Conductance	0.313	mS/cm			
Dissolved Oxygen	9.83	mg/L			
Dissolved Oxygen, % Saturation	104.3	%			
Turbidity	10.14	NTU			

Lab Results from Field Samples				
parameter	value	units	RL	
Total Suspended Solids, TSS	ND	mg/L	10	
Volatile Suspended Solids, VSS	ND	mg/L	10	
TSS-VSS	ND	mg/L	10	
Water Column Chlorophyll a	2.4		0.1	
Benthic Chlorophyll a	31.6		0.1	
Total Phosphorus, TP	0.025		0.004	
Total Kiejdahl Notrogen, TKN	ND		0.5	
Nitrate + Nitrite	ND		0.01	
Total Nitrogen, TN				

Macroinvertabrate Data Results					
parameter	value	units			
TOTAL SCORE (max =18)	5	score			
PERCENT OF MAX SCORE	28	%			
IMPAIRMENT CLASSIFICATION	MODERATE	IMPAIRMENT			
USE SUPPORT	PARTIAL SI	JPPORT			

		Pebble Count Data				
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total	
S/C	0.5	<1	27	22.13	22.13	
S	1.5	1-2	12	9.84	31.97	
FG	3	2-4		0.00	31.97	
FG	5	4-6	3	2.46	34.43	
FG		6-8		0.00	34.43	
MG		8-12	3	2.46	36.89	
MG		12-16	4	3.28	40.16	
CG		16-22	4	3.28	43.44	
CG		22-32	9	7.38	50.82	
CG		32-45	16		63.93	
CG	54.5	45-64	16	13.11	77.05	
SC		64-90	10		85.25	
SC		90-128	11	9.02	94.26	
MC		128-180	4		97.54	
LC		180-256	1	0.82	98.36	
LC		256-362	2	1.64	100.00	
SB		362-512		0.00	100.00	
MB	768	512-1024		0.00	100.00	
LB	1536	1024-2048		0.00	100.00	
BR		>2048		0.00	100.00	
		TOTALS	122	100.00	100.00	
		D50 particle size (mm)	27			
		% Fines (<2mm)	31.97			
	M12FLATC03	Date-	7/22/2003		9:45	
	Flat Creek Upstream of Hwy 200, on Dearborn Ranch property					



	BEHI Field Measures			BEHI Calculated Values			
	Parameter	Value	Units	Parameter	Value	Units	
_	Rod reading @ Upstream Edge			Slope	0.0046		
ongitudinal Information	of Water	10.92	feet	Sinuousity	1.23		
ud nat	Rod reading @ Downstream			Max Depth	3.15	feet	
orn	Edge of Water	13.05	feet	Floodprone Height	6.30	feet	
ات ب	Stream Distance	467.50	feet	Mean Depth	2.15	feet	
	Straightline Distance	381.00	feet	Bankfull Width	23.00	feet	
_	Left Edge of Bankfull	83.00	feet	Floodplrone Width	63.00	feet	
Cross-Sectional Information	Right Edge of Bankfull	106.00	feet	Bankfull Area	49.39	ft^2	
oss-Section Information	Rod reading @ Thalweg	13.60	feet	FloodproneArea		ft^2	
Sec	Rod reading @ Bankfull Depth	10.45	feet	W/D Ratio	10.71		
for SS-	Rod reading @ Floodplain Depth	7.30	feet	Cross Sectional Area	49.39	ft^2	
õ =	Left Edge of Floodprone depth	55.00	feet	Entrenchment Ratio	2.74		
O	Right Edge of Floodprone depth	118.00	feet				
uo	Bank Height	4.00	feet				
atic	Bankfull Height	2.82	feet	Bank Ht/Bankfull Ht	1.42		
Ĕ	Root Depth	0.50		Root Depth/Bank Ht	0.13		
Ę.	Root Density	20.00	, •	Root Density	20	%	
=	Bank Angle		Degrees	Bank Angle		degrees	
BEHI Information	Surface Protection	80.00	%	Surface Protection	80	%	
_							
Stress	Velocity at thalweg		ft/sec	Velocity Gradient		ft/sec/ft	
tre	Tape reading at thalweg		feet	Near Bank stress /			
ar Bank Stre Information	velocity at left bank		ft/sec	Mean Shear stress			
Bank format	tape reading at left bank		feet	A nb / A			
r B	Near bank stress						
Near	Mean shear stress		64.0				
Z	Near bank x-sectional area		ft^2				

W112FLATC03	Date-	7/22/2003	9:	9:45		
Flat Creek Upstream of Hwy 200, on Dearborn Ranch property						
BEHI Associa	ted Index Value (from form)		Pos	sible Adjustment Factors	
Bank Ht/Bankfull Ht			5.20		Bank Materials	
Root Depth/Bank Ht			8.00	Bedrock is alw	ays Very Low	
Root Density			6.40	Boulders are a	always Low	
Bank Angle			3.00	Cobble decrease the category by one unless the mi		
Surface Protection			1.50	of Sand/Gravel is over 50%		
Total Index Value 24.1		Gravel- adjust	Gravel- adjust the values up 5-10 pts depending on			
Numeric Adjustments:		sand composition				
Bank Materials Index adjustment: 0		Sand- adjust t	he values up 10 pts			
Bank Materials index adjustment	•		U	silt/clay- no ad	ljustment	
Bank Stratification Index adjustment: 6		6		Stratification		
				5-10 pts upwa	rd depending on position of unstable	
Total adjusted	Index Value: 30.1 layers relative to bankfull stage					
Bank Ero	sion Potential F	Rating:			MDDERATE-HIGH	

Date-

7/23/2003

16:00

M12FLATC08

Geomorphology Data						
parameter value units Bankfull Width 33.00 Ft Mean Depth 3.67 Ft Bnkfull X-sect area 120.96 Sq Ft Width/Depth 9.00 Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm) 15.79 %	Flat Creek below Birdtail Rd on Dearborn Ranch					
parameter value units Bankfull Width 33.00 Ft Mean Depth 3.67 Ft Bnkfull X-sect area 120.96 Sq Ft Width/Depth 9.00 Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm) 15.79 %						
parameter value units Bankfull Width 33.00 Ft Mean Depth 3.67 Ft Bnkfull X-sect area 120.96 Sq Ft Width/Depth 9.00 Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm) 15.79 %						
parameter value units Bankfull Width 33.00 Ft Mean Depth 3.67 Ft Bnkfull X-sect area 120.96 Sq Ft Width/Depth 9.00 Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm) 15.79 %	Geomorphology D	ata				
Bankfull Width 33.00 Ft Mean Depth 3.67 Ft Bnkfull X-sect area 120.96 Sq Ft Width/Depth 9.00 Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm) 15.79 %			units			
Mean Depth 3.67 Ft Bnkfull X-sect area 120.96 Sq Ft Width/Depth 9.00 Max Depth Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity EHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 Percentage of Fines (<2mm)						
Bnkfull X-sect area 120.96 Sq Ft Width/Depth 9.00 Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm)			-			
Width/Depth 9.00 Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm)						
Max Depth 5.49 Ft Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm)			3971			
Flood prone width 100.00 Ft Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm) 15.79 %	•		Ft			
Entrenchement Ratio 3.03 Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm)						
Water slope 0.0017 Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm)			, .			
Channel Sinuosity 2.59 BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm)						
BEHI Index Score (adjusted) 29.00 BEHI Rating Moderate Channel D50 10 mm Percentage of Fines (<2mm)						
Channel D50 10 mm Percentage of Fines (<2mm)						
Channel D50 10 mm Percentage of Fines (<2mm)	BEHI Rating	М	oderate			
ů , ,		10	mm			
· , ,	Percentage of Fines (<2mm)	15.79	%			
Stream Type E4 Sinuousity and W/D made it E over	Stream Type	E4	Sinuousity and W/	D made it E over C		
Discharge 5.39 cfs		5.39	cfs			

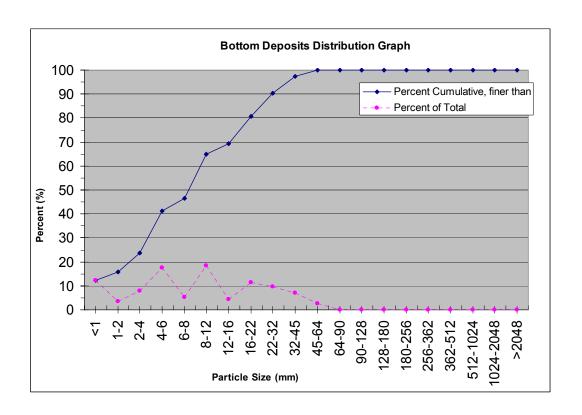
Stream Reach Habitat Assessments				
Parameter	Value	Units		
Stream Reach Assessment Score (NRCS)	94.8	%		
Stream Reach Assessment Score (MT adjusted)	94.1	%		
Macroinvertabrate Habitat Assessment Score	66.2	%		
OVERALL SITE RATIN	IGS			
Stream Reach Assessment Score (NRCS)	Non Impaire	d, Fully Supporting		
Stream Reach Assessment Score (MT adjusted)				
Macroinvertabrate Habitat Assessment Score				

Field Measurements of water chemistry					
parameter value units					
Flow	5.39	cfs			
Temperature, water	21.98	degree C			
рН	8.4				
Specific Conductance	0.438	mS/cm			
Dissolved Oxygen	11.26	mg/L			
Dissolved Oxygen, % Saturation	129	%			
Turbidity	5.72	NTU			

Lab Results from Field Samples				
parameter	value	units	RL	
Total Suspended Solids, TSS	ND	mg/L	10	
Volatile Suspended Solids, VSS	ND	mg/L	10	
TSS-VSS	ND	mg/L	10	
Water Column Chlorophyll a	0.9	mg/m^3	0.1	
Benthic Chlorophyll a	32.8	mg/m^3	0.1	
Total Phosphorus, TP	0.057	mg/L	0.004	
Total Kiejdahl Notrogen, TKN	ND	mg/L	0.5	
Nitrate + Nitrite	ND	mg/L	0.01	
Total Nitrogen, TN		mg/L		

Macroinvertabrate Data Results						
parameter value units						
TOTAL SCORE (max =18)	6	score				
PERCENT OF MAX SCORE	33	%				
IMPAIRMENT CLASSIFICATION	MODERATE	IMPAIRMENT				
USE SUPPORT	PARTIAL SI	JPPORT				

		Pebble Count Data					
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total		
S/C	0.5	<1	14	12.28	12.28		
S	1.5	1-2	4	3.51	15.79		
FG	3	2-4	9	7.89	23.68		
FG	5	4-6	20	17.54	41.23		
FG	7		6	5.26	46.49		
MG	10	8-12	21	18.42	64.91		
MG	14	12-16	5	4.39	69.30		
CG		16-22	13	11.40	80.70		
CG		22-32	11	9.65	90.35		
CG		32-45	8	7.02	97.37		
CG	54.5	45-64	3	2.63	100.00		
SC	77	64-90		0.00	100.00		
SC	109	90-128		0.00	100.00		
MC	154	128-180		0.00	100.00		
LC		180-256		0.00	100.00		
LC		256-362		0.00	100.00		
SB	437	362-512		0.00	100.00		
MB	768	512-1024		0.00	100.00		
LB	1536	1024-2048		0.00	100.00		
BR		>2048		0.00	100.00		
		TOTALS	114	100.00	100.00		
		D50 particle size (mm)	8-12				
		% Fines (<2mm)	15.79				
	M12FLATC08 Date- 7/23/2003 16:00						
	Flat Creek below Birdtail Rd on Dearborn Ranch						

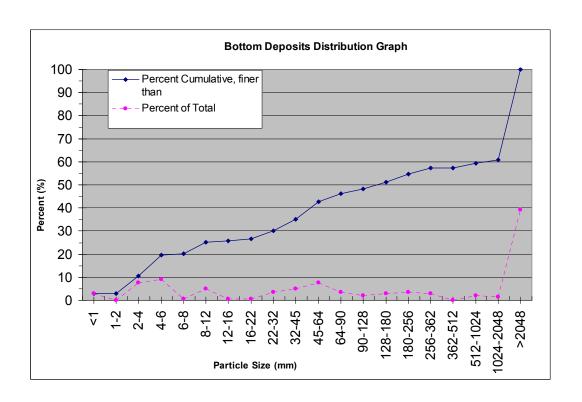


	BEH	BEHI Field Measures			BEHI Calculated Values			
	Parameter		Value	Units	Parameter	Value	Units	
Longitudinal Information	Rod reading @ Upstream Edge of				Slope	0.0017		
	Water	3.	12.03	feet	Sinuousity	2.59		
	Rod reading @ Downstrea	m Edge of			Max Depth	5.49	feet	
	Water		14.25	feet	Floodprone Height	10.97	feet	
	Stream Distance		1340.00	feet	Mean Depth	3.67	feet	
	Straightline Distance		517.00	feet	Bankfull Width	33.00	feet	
=	Left Edge of Bankfull		47.00	feet	Floodplrone Width	100.00	feet	
ë =	Right Edge of Bankfull		80.00	feet	Bankfull Area	120.96	ft^2	
ij či	Rod reading @ Thalweg		16.62	feet	FloodproneArea		ft^2	
Se Ti	Rod reading @ Bankfull Depth		11.13	feet	W/D Ratio	9.00		
Cross-Sectional Information	Rod reading @ Floodplain Depth		5.65	feet	Cross Sectional Area		ft^2	
Š E	Left Edge of Floodprone depth		10.00	feet	Entrenchment Ratio	3.03		
0	Right Edge of Floodprone	depth	110.00	feet				
nc	Bank Height		11.00	feet				
atic	Bankfull Height		5.88		Bank Ht/Bankfull H			
Ě	Root Depth		1.00		Root Depth/Bank I			
BEHI Information	Root Density		25.00		Root Density	25		
= =	Bank Angle			Degrees	Bank Angle		degrees	
Ϋ́	Surface Protection		50.00	%	Surface Protection	n 50	%	
	V-120 0 (b-1		0.70	(1/	Mala aita On "		£1/ (£1	
Stress	Velocity at thalweg		****	ft/sec	Velocity Gradient		ft/sec/ft	
Stre	Tape reading at thalweg		63.00		Near Bank stress			
Near Bank Stre Information	velocity at left bank		****	ft/sec	Mean Shear stres	S		
	tape reading at left bank Near bank stress		49.00	ieet	A nb / A			
	Mean shear stress							
	Near bank x-sectional area			ft^2				
	M12FLATC08	Date-	7/23/2003		5:00			
	Flat Creek below Birdtail Rd on Dearborn Ranch							
	i lat Greek below Birutali	Nu on Dear	JUITI NATICII					

M12FLATC08	Date-	7/23/2003	16:00				
Flat Creek below Birdtail Rd on Dearborn Ranch							
BEHI Associated Index Value (from form)			Pos	sible Adjustment Factors			
Bank Ht/Bankfull Ht			6.00		Bank Materials		
Root Depth/Bank Ht			8.00	Bedrock is alv	vays Very Low		
Root Density			6.00	Boulders are always Low			
Bank Angle			5.00	Cobble decrea	crease the category by one unless the mixture		
Surface Protection			4.00	of Sand/Grave	ravel is over 50%		
Total Index Value		29.0	Gravel- adiust	the values up 5-10 pts depending on			
Numeric Adjustments:				sand composition			
Bank Materials Index adjustment:				Sand- adjust t	he values up 10 pts		
				silt/clay- no ad	djustment		
					Stratification		
Bank Stratification Index adju	stment:			5-10 pts upwa	ard depending on position of unstable		
Total adjuste	ed Index Value	e:	29.0 layers relative to bankfull stage				
Bank E	rosion Potent	ial Rating:			Moderate		

M12FLATC04	Date-	7/24/200	10:00
Flat Creek at confluence with Dearborn River o	n Dearborn I	Ranch	
			_ [
Geomorphology I	Data		
parameter	value	units	
Bankfull Width		Ft	
Mean Depth		Ft Sa Et	_
Bnkfull X-sect area Width/Depth		Sq Ft	_
Max Depth		Ft	
Flood prone width		Ft	
Entrenchement Ratio			
Water slope			
Channel Sinuosity BEHI Index Score (adjusted)	-		_
BEHI Rating			_
Channel D50	154	mm	
Percentage of Fines (<2mm)	2.80		
Stream Type			
Discharge	4.08	cfs	
Stream Reach Habitat As	cacemanta		_
Parameter	Value	Units	
Stream Reach Assessment Score (NRCS)	value	%	
Stream Reach Assessment Score (MT adjusted)		%	
Macroinvertabrate Habitat Assessment Score	86.5		
OVERALL SITE RATI	NGS		
Stream Reach Assessment Score (NRCS)			
Stream Reach Assessment Score (MT adjusted)			
` , , , ,			2.5 min
Macroinvertabrate Habitat Assessment Score			30"
			30
Field Measurements of wat	ter chemis	try	, I
Field Measurements of wat parameter	ter chemist	t ry units	.
	value 4.08	units cfs	
parameter Flow Temperature, water	value 4.08 19.92	units cfs degree C	
parameter Flow Temperature, water pH	value 4.08 19.92 8.4	units cfs degree C	
parameter Flow Temperature, water pH Specific Conductance	value 4.08 19.92 8.4 0.366	units cfs degree C mS/cm	
Parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen	value 4.08 19.92 8.4 0.366 10.14	units cfs degree C mS/cm mg/L	
Parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation	value 4.08 19.92 8.4 0.366 10.14 111.4	units cfs degree C mS/cm mg/L	
parameter Flow Temperature, water pH Specific Conductance	value 4.08 19.92 8.4 0.366 10.14 111.4	units cfs degree C mS/cm mg/L %	
Parameter Flow Temperature, water OH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28	units cfs degree C mS/cm mg/L %	
Parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples	units cfs degree C mS/cm mg/L % NTU	
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value	units cfs degree C mS/cm mg/L % NTU	RL 10
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND	units cfs degree C mS/cm mg/L % NTU units mg/L	10
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value	units cfs degree C mS/cm mg/L % NTU	_
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L	10 10
Plow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND ND ND ND ND N	wnits cfs degree C mS/cm mg/L % NTU wnits mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/m^3 mg/m^3	10 10 10 0.1 0.1
Plant Properties of the Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/m/3 mg/L	10 10 10 0.1 0.1 0.004
Plant Process of the Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Plant Programmeter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004
Plant Programmeter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/m^3 mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
Plant Programmeter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/M^3 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 Samples value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/m^3 mg/h^3 mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter	value	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter TOTAL SCORE (max =18)	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5
parameter Flow Temperature, water pH Specific Conductance Dissolved Oxygen Dissolved Oxygen, % Saturation Turbidity Lab Results from Field parameter Total Suspended Solids, TSS Volatile Suspended Solids, VSS TSS-VSS Water Column Chlorophyll a Benthic Chlorophyll a Total Phosphorus, TP Total Kiejdahl Notrogen, TKN Nitrate + Nitrite Total Nitrogen, TN Macroinvertabrate Data parameter	value 4.08 19.92 8.4 0.366 10.14 111.4 3.28 value ND ND ND ND ND ND ND N	units cfs degree C mS/cm mg/L % NTU units mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	10 10 10 0.1 0.1 0.004 0.5

		Pebble Count Data				
	Mean size	Particle Size (mm)	Sum	% Total	Cum. Total	
S/C	0.5	<1	4	2.80	2.80	
S	1.5	1-2		0.00	2.80	
FG	3	2-4	11	7.69	10.49	
FG	5	4-6	13	9.09	19.58	
FG	7	6-8	1	0.70	20.28	
MG		8-12	7	4.90	25.17	
MG		12-16	1	0.70	25.87	
CG		16-22	1	0.70	26.57	
CG		22-32	5	3.50	30.07	
CG		32-45	7	4.90	34.97	
CG		45-64	11	7.69	42.66	
SC		64-90	5	3.50	46.15	
SC		90-128	3	2.10	48.25	
MC		128-180	4	2.80	51.05	
LC		180-256	5		54.55	
LC		256-362	4	2.80	57.34	
SB		362-512		0.00	57.34	
MB	768	512-1024	3	2.10	59.44	
LB	1536	1024-2048	2	1.40	60.84	
BR		>2048	56	39.16	100.00	
		TOTALS	143	100.00	100.00	
		D50 particle size (mm)	128-180			
		% Fines (<2mm)	2.80			
	M12FLATC04	Date-	7/24/2003		10:00	
	Flat Creek at confluence with Dearborn River on Dearborn Ranch					



BIOLOGICAL DATA AND REPORTS